

Mediation Analysis of Perceived Performance of Ghana Black Stars at the Qatar FIFA World Cup on Satisfaction of Football Fans: A Comparative Path Analysis

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ABSTRACT

The mediation effects of the perceived performance of the Ghana Black Stars at the Qatar FIFA World Cup were examined on the satisfaction of football fans in Ghana. A cross-sectional design with closed-ended questions on Google Forms was used to collect data through football fans' pages on WhatsApp and Facebook. Ghanaian adults aged 18 and above participated in the study with a sample of 618 gathered through a random sampling procedure. Estimators of Path models were compared with WLSMV outperforming others. The findings revealed that lack of coherence (p -value=0.002) among players reduces the performance of players, while the higher the perception of call-ups (p -value=0.035) the higher the perceived performance of Black Stars. Good perceived football governance (p -value<0.001) led to improvement in the perceived performance of the Black Stars. The higher performance of the Black Stars led to improved satisfaction among football fans (p -value<0.001). However, a poor technical team (p -value=0.015) for the Black Stars reduced the satisfaction of football fans. Lack of coherence among players (p -value=0.003) indirectly affects the satisfaction of football fans by compromising the perceived performance of Black Stars. Good governance (p -value=0.001) indirectly improves the satisfaction of football fans by improving the performance of Black Stars. The satisfaction of football fans in Ghana is linked to lack of coherence among players, perceived performance of Black Stars, call-ups and good governance.

Keywords: Football performance; Ghana black stars; satisfaction; structural equation modeling

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INTRODUCTION

The men's national football team of Ghana (also referred to as Black Stars) has made successful field performances into the FIFA World Cup following its debut in 2006 (reaching the Round of 16) and 2010 (reaching the quarter-finals). Following these success stories, the narrative changed from Brazil 2014 (eliminated at group stages) to Russia 2018 (didn't qualify) and even at Qatar 2022 (Uruguay eliminated same at the group stages). This is not only so at FIFA tournaments, but at the recent 2021 and 2023 AFCON in Cameroon and Cote D'Ivoire respectively, the Black Stars failed to perform from the group stages (Adewuyi, 2022; GFA, n.d). These generated some



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perceptions and dissatisfaction among Ghanaian football fans in the context of field performance of the Black Stars, and resulted in a protest on the streets of Accra where some sport journalists and football fans protested against the GFA in anticipation of support of football fans for the 2026 FIFA World Cup scheduled to take place in USA, Canada and Mexico.

However, the depth of this perception and level of satisfaction among football fans resulting from the field performances of the Black Stars lack research to underpin decisions at the Ghana Football Association (GFA), and to what tactics may be adopted in the next tournament is unclear. Thus, this study examined the depth of opinion and the factors of satisfaction among Ghanaian football fans during field performances of the Black Stars at FIFA tournaments.

LITERATURE REVIEW

Ghana's Qualification at FIFA World Cup

Literature in the context of Ghana's history at the World Cup may have a brief review, but this is consequential as the country in Western Africa has deeply secured its place among the excellent football nations in the world and, in an attempt to appear on the international football tournament, made their debut in Germany 2006. The 1964 FIFA ruling which mandated winners of the continental zones – Africa, Asia and Oceania to compete for one slot for the then World Cup, eventually resulted in a Ghana-led boycott of the continental competitions (De Villiers, 2022). Despite this, UEFA received 10 out of 16 slots, CONMEBOL had 4 slots, and CONCACAF had 1 slot, with African countries arguing at the time for another qualification slot, and the tournament expansion (De Villiers, 2022). During such periods, one would have counted Ghana among the favourite teams in the context of winning the Africa Cup of Nations consecutively in 1963 (hosted by Ghana), 1965 and 1978 (Ghana Web, 2021).

Following the boycott Ghana led, resulted in positive feedback which saw the expansion of the teams at the FIFA tournament in 1970 and a positive return of African nations (BBC, 2016). Given this, Ghana made its debut for the Germany 2006 World Cup in an away match beating Cape Verde four goals to nil (4-0) (Opoku-Agyemang, 2022). In this tournament in Germany, Ghana qualified from the group stages, beating the United States of America two goals to one (2-1) to the Round of 16, where Ghana played against Brazil to qualify for the quarter-finals, but was nailed three goals to nil (3-0) by the Brazilians (De Villiers 2022; FIFA 2022). In the next edition of the FIFA tournament in 2010 in South Africa, Ghana beat Sudan by two goals to nil (2-0) to be eligible for the tournament in South Africa (GFA, 2022). In the group stages of this tournament in South Africa, Ghana qualified from the group stages to the Round of 16 and headed to the quarter-finals for the first time in the history of football in the country, but was unfortunately eliminated by Uruguay on a penalty shoot-out to reach semi-finals (Ayamga, 2022).

In contrast to the successful qualification story of the Black Stars at the FIFA World Cup, a new trend has set in from the Brazil 2014 World Cup, where Ghana was unable to qualify from the group stages to the next Round of 16, being beaten by Portugal in their final group stage match on two goals to one (2-1) (Rose, 2022; GFA, 2022). Following on, the next edition of the World Cup at Russia 2018, witnessed the Black Stars not being able to qualify from the continental group to Russia. Indeed, one would be tempted to say it was a bizarre moment for Ghana known for its football

prowess and reputation in Africa, and International platforms as among the top-performing football nations on the planet.

But this does not end there, the narrative seemingly appeared to be having a positive turn, as this time, Ghana now qualified from the continental groups beating South Africa in a home match and also Nigeria in an away match play-off to the FIFA World Cup Qatar 2022. Ghana was placed in Group- H in the FIFA ballot process together with Portugal, Korea Republic and Uruguay. Ghana lost its first match in the group stages against Portugal, won the second match against Korea Republic, but unfortunately lost again in the third match against Uruguay, unable to qualify for the Round of 16 (Adewuyi, 2022).

Performance and Satisfaction

The literature on performance and how it relates to satisfaction or otherwise has been vast. In the context of this study, performance is defined as the successful progress of the Black Stars through qualification tournaments from the continental level to group stages to finals (Ertiken & Avundunk, 2021). In line with this definition, we sought to find out how the effective and productive processes leading to the formation of the Black Stars team affect the satisfaction of the fans. Satisfaction among football fans, supporters and boosters seemingly hinged on the performance of a sports team, and this may often translate into positive attitudes and behaviour towards a team or club in diverse ways (Nartiyok, 2019).

For example, a study revealed how team performance translated into fans' satisfaction leading to the consumption of the teams' products (Gray & Wert-Gray 2011). In another study, the findings showed how team sticking together, communication within, and established standards, led to team performance and influenced satisfaction among fans, and a dire essence of athletes desiring to remain in the team (Aboagye and Rocha, 2019; Tepeci and Onag, 2014). Again, a further study revealed variables that were linked to team performance as leadership style, team behaviour, communication and feedback which led to satisfaction among football fans (Salcinovic et al., 2022). Furthermore, a study which assessed the relationship between perceived team work, social cohesion, task cohesion and collective efficacy influenced the performance of the team and ultimately led to fans' satisfaction (McEwan, 2019). Moreover, another study showed that quality coach-athlete relationships influenced performance on the field of play among Brazilian athletes, and resulted in satisfaction among the football fans (Contreira et al., 2019).

In addition, Fransen, McEwan and Sarkar (2020) also identified how inclusivity among sports teams can foster team performance and satisfaction among football fans in a safe and psychologically- friendly atmosphere. More so, another study showed that leadership and relationships among sports teams are essential factors to foster performance and lead into football fans' satisfaction (Jowett and Arthur 2019). Again, a study conducted on the 2015 Rugby World Cup revealed that distinct emotions that express joy, anger, sadness and love were outcomes of team empathy, and this influenced fans' support and satisfaction and to a large extent, fans' attachment to sport teams (Prayag et al., 2019). Furthermore, Kim, Do Kim and Lee (2019) further revealed that genuine leadership emanating from head coaches positively influenced athletes' psychological capital, and this further influenced the performance of the athletes and their psychological well-being, resulting into fans' satisfaction and support for the team.

It is evident the correlation between satisfaction and performance of sport teams, but this varies from different perspectives and angles from varying jurisdictions. Also, studies on the satisfaction among football fans and performance from sports teams' construct, have mainly focused on team cohesion, team behaviour, and relationships among others and how it translates into team performance, with little or no focus on factors culminating into fans' satisfaction, perceived intent and support for the team. Thus, this study aimed at examining the factors influencing fans' satisfaction, support and perceived intent from field performances of the Black Stars, underpinned by social exchange theory.

Theoretical Framework

The study hinges on the social exchange theory propagated by the American Sociologist George Homans in his published article titled "Social Behaviour as Exchange" and grounded theory. The theory propagates balance between systems, entities, individuals and groups as they interact and build relationship in society to foster satisfaction and equal performance for the overall benefit of stakeholders (Cook et al., 2013). It is in view of this that the study adopts the social exchange theory taking into perspective the interactions that exist between the Ghana Football Association, football fans, players, and sponsors among others to ensure balance creation between the GFA and players to bring satisfaction to the football fans. The GFA must provide the necessary training facilities, resources and support for the players while the latter also delivers their utmost best field performance to attract fans to the national team, and ultimately give them the satisfaction they look for (Russell et al., 2016) By so doing, the quality of play from the players is likely to reflect and attract sponsors to the team and translate into football development in Ghana.

The social exchange theory guided the researchers to establish the relationship that existed between call-ups, governance, motivation, lack of coherence, technical team, medical care, training facilities and on-field performances of the Black Stars and how these directly and or indirectly influenced satisfaction of football fans in Ghana. Thus, the construction of a satisfaction model in this study is underpinned by the social exchange theory postulates to inform policies, decisions and practices at the GFA for football development in Ghana.

The study aimed to test the hypotheses below:

1. Satisfaction of football fans is directly affected by field performances, training facilities, call-ups, governance, poor technical team, motivation and lack of coherence.
2. Satisfaction of football fans is also indirectly affected by training facilities, call-ups, governance, poor technical team, motivation and lack of coherence through field performances

METHODS

The study gathered data in a quantifiable manner from football fans in line with the assertion of Skinner, Edwards and Corbett (2015) that the quantitative approach to sports management research uses statistics to conduct an inquiry in an unbiased and objective manner. This is also in line with the assertion of Watson (2015) who indicates that adopting quantitative research embraces a variety of methods in line with systematic inquiry of social phenomenon being enhanced by numerical data.

Participants

Ghanaian adults aged 18 and above participated in the study with a total sample of (N=618). The study adopted quantitative research using a survey design with closed-ended questions on Google Forms to collect data through football fans' pages via WhatsApp and Facebook. Individuals without smart devices and or unavailable on WhatsApp and Facebook were excluded. From the sample which participated, 371 were males representing 60% of the sample, while 247 were females representing 40%. The age ranges of participants were from 18-29 representing 56.3% and 30+ representing 43.7%. The majority of the participants were single representing 66.7%, with those married representing 33.3%. The majority of the participants had tertiary education representing 96.3%.

Procedures

Data was gathered through a random sampling procedure between April 11 and October 18, 2023 and analysed using Path analysis to find factors affecting football fans' perceived satisfaction and perceived field performances of the Black Stars. Participants were noted of the study through the Ghana League Club Association fans' directory, where the contacts of administrators and presidents of the various social media pages and fans group were picked. Through the administrators and presidents, the study was communicated to participants in a written form and informed consent was collected through an online poll, and the validated research instrument sent to participants through a response link. Approval and consent were sought from the Research and Ethics Committee of the first author's institution and indicated on the Google form. Confidentiality and anonymity were highly adhered to in this study by concealing participants' identities and data, not sharing participants' information and solely used for this research purpose.

Measures

1. *Satisfaction*. The satisfaction of football fans was assessed with 3 items adapted from a previous study (Adam et al., 2023) The response levels are rated using a 5-point Likert scale, which ranges from 1: strongly disagree to 5: strongly agree. The responses were scored such that high scores indicate a higher level of satisfaction. Sample items of this scale include: "Degree of satisfaction with Black Star's games", "Call-ups to the team", and "Expectations fulfilment relating to Black Star's games".
2. *Performance*. The perception of football fans regarding the performance of Black Stars was assessed with 3 items adapted from a previous study (Filho et al., 2021). The response levels are rated using a 5-point Likert scale, which ranges from 1: strongly disagree to 5: strongly agree. The responses were scored such that high scores indicate higher performance. Sample items of this scale include: "Black Stars players give 100% every game", "Black Stars players have superior skills" and "Black Stars team score all the time".
3. *Perception on training facilities*. The perception of football fans regarding training facilities was assessed with 3 items adapted from a validated sport performance perceptions scale manual from the College of Kinesiology, University of Saskatchewan (Adam et al., 2023). The response levels are rated using a 5-point Likert scale, which ranges from 1: strongly disagree to 5: strongly agree. The responses were scored such that high scores indicate a higher positive perception of training facilities. Sample items of this scale include "Black stars have quality

training pitches”, “Black stars have adequate training pitches” and “Black stars play in a modern stadium”.

4. *Perception on call-ups to the team.* Perception of football fans regarding call-ups to the team was assessed with the item: “Foreign-based Ghanaians dominate Black star’s team” adapted from a previous study (Adam et al., 2023). The response levels are rated using a 5-point Likert scale, which ranges from 1: strongly disagree to 5: strongly agree. The responses were scored such that high scores indicate a higher positive perception of call-ups to the team.
5. *Perception on Football Governance.* The perception of football fans regarding football governance was assessed with 3 items adapted from a previous study (Adam et al., 2023). The response levels are rated using a 5-point Likert scale, which ranges from 1: strongly disagree to 5: strongly agree. The responses were scored such that high scores indicate a higher perception of good football governance. Sample items of this scale include: “Executive members of GFA are competent”, “Executive members of GFA have member equality” and “GFA operates in an open, transparent and accountable manner”.

Statistical Analysis

Median and range was used to present descriptive results. A path model, a component of structural equation modeling was used to fit the relationship between the endogenous and exogenous variables. The endogenous variable is the type of variable that serves as a dependent variable only in the study, for example, satisfaction, while exogenous variables serve as independent variables at a point in the study, for example, performance, training facilities, call-ups, governance, poor technical team, and lack of coherence.

The data used for this study deviated from normality. Estimation methods such as maximum likelihood (ML), robust maximum likelihood, Weighted Least Square Mean and Variance Adjusted Estimators (WLSMV), generalized least squares (GLS) and asymptotic distribution free estimators (ADF) (Adedia, Adebajji and Appiah, 2020) were compared. Although the ML has been shown to perform well with small samples (Adedia et al. 2020) it breaks down with outliers and non-normal data. Other methods like RML, GLS and ADF were proposed to handle the non-normality of a dataset. However, ADF performs well when the sample size is large. Moreover, some of these methods can model dichotomous variables, but they have some limitations. The WLSMV estimator was developed to handle categorical datasets (Rosseel 2014). In this study, some of the variables were determined by composite scores, through summation of the sub-scales, which makes them quantitative. However, some of the variables are dichotomous, so to better understand the information in these data with path analysis, it is better to compare these estimators.

The path model helps to determine the mediation effect of perceived performance on the association between the perceived satisfaction of football fans and other variables. The direct and indirect effects existing in the model were also assessed. The appropriateness of the models in fitting the data was assessed with fit indices (Adedia et al., 2020; Rosseel, 2014). The fit indices include badness of fit indices, such as root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), root mean residual (RMR) and correlation root mean square residual (CRMR). A badness of fit index with a value of at most 0.05, implies a perfect model fit, while a value between 0.05 and 0.08 is acceptable (Adedia, Adebajji

& Appiah, 2021). Absolute and Relative fit indices, such as goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normed fit index (NFI) and comparative fit index (CFI), were also used (Rosseel 2014). A perfect model fit based on absolute or relative fit index should report a value which is at least 0.95. Moreover, a model which has an absolute or relative fit index value of at least 0.90 is acceptable (Alidu, Adedia & Amidu, 2022). All tests were done at a 5% level of significance.

RESULTS AND DISCUSSION

Findings

From Table 1, data were collected from 618 participants: males (60%) and females (40%); 18-29 years (56.3%) and 30+ years (43.7%). The majority of the respondents were single (66.7%), Christians (93.3%), and had tertiary education (96.3%).

Table 1. Demographic characteristics

Characteristics	N	%
Sex		
Male	371	60
Female	247	40
Ages		
18-29	348	56.3
30+	270	43.7
Marital status		
Married	206	33.3
Single	412	66.7
Education		
Tertiary	595	96.3
SHS	23	3.7
Religion		
Christian	577	93.3
Non-Christian	41	6.7

Table 2, indicates the factors that may have contributed to poor on-field performance of the Black Stars. Based on the perceptions of respondents, the factors that may have contributed to Black Stars performance at Qatar World Cup includes; lack of coherence among the players (74.8%), poor technical team (68.1%), poor tactics from the coach (60%), and unavailability of required medical team for the Black Stars (65.9%). Majority of the respondents disagreed that lack of motivation (70.4%) and the feature of Luiz Suarez (67.4%) did contribute to Black Stars poor performance at Qatar FIFA World Cup (Table 2).

Table 2. Factors that may have contributed to the Black Stars performance at the Qatar FIFA World Cup

	N	%
Do you think poor tactics from the coach caused the Black Stars exit at Qatar World Cup?		
Yes	371	60
No	247	40
Do you think poor technical team caused the Black Stars exit at Qatar World Cup?		
Yes	421	68.1

No	197	31.9
Do you think lack of motivation may have caused the Black Stars exit at Qatar World Cup?		
Yes	183	29.6
No	435	70.4
Do you think the feature of Luiz Suarez may have contributed to Black Stars exit at Qatar?		
Yes	201	32.6
No	417	67.4
Do you think lack of coherence among the players caused the Black Stars not to qualify from the group stages at Qatar World Cup?		
Yes	462	74.8
No	156	25.2
Do you think the Black Stars have the required medical team?		
Yes	211	34.1
No	407	65.9

From Table 3, the items for measuring the Black Star's performance and satisfaction reported a Cronbach's alpha of 0.56 and 0.69, respectively. Also, items for measuring perceptions on training facilities and football governance reported Cronbach's alpha of 0.92 and 0.80, respectively. The items showed an acceptable internal consistency. The average variance for items measuring football governance, training facilities, satisfaction and performance are 0.57, 0.79, 0.51 and 32, respectively. The various measures have convergent validity as most of them reported average variance more than 0.5. Even though performance measures reported average variance less than 0.50, all the items significantly measured performance with appreciable factor loadings. The composite reliability for items measuring football governance, training facilities, satisfaction and performance are 0.80, 0.92, 0.73 and 0.57, respectively. Most of these values are more than 0.70, implying discriminant validity of the measures.

Table 3. Performance/ Satisfaction and Perception of Football Fans in Ghana

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Median (Range)
Performance (Source: Filho et al. 2021)						
Black Stars players give 100% every game	165(26.7)	155(25.2)	220(35.6)	46(7.4)	32(5.2)	2(1,5)
Black Stars players have superior skills	82(13.3)	155(25.2)	243(39.3)	87(14.1)	50(8.1)	3(1,5)
The Black Stars team scores all the time	197(31.9)	183(29.6)	156(25.2)	46(7.4)	37(5.9)	2(1,5)
Satisfaction (Source: Filho et al. 2021)						
Degree of satisfaction with the Black Star's games	119(19.3)	188(30.4)	243(39.3)	46(7.4)	23(3.7)	3(1,5)
Expectations fulfilled concerning Black Stars games	183(29.6)	179(28.9)	192(31.1)	46(7.4)	19(3)	2(1,5)
Comparison of Black Star's games with Morocco	238(38.5)	179(28.9)	142(23)	37(5.9)	23(3.7)	2(1,5)
Perception of Football fans (Source: Adam et al. 2023)						

Black Stars have quality training pitches	325(52.6)	110(17.8)	101(16.3)	59(9.6)	23(3.7)	1(1,5)
Black Stars have adequate training pitches	312(50.4)	124(20)	92(14.8)	59(9.6)	32(5.2)	1(1,5)
Black Stars train in a modern stadium	325(52.6)	110(17.8)	96(15.6)	46(7.4)	41(6.7)	1(1,5)
Foreign-based Ghanaians dominate the Black Stars team	92(14.8)	23(3.7)	82(13.3)	110(17.8)	312(50.4)	5(1,5)
There is Pay-to-play in the Black Stars team	41(6.7)	46(7.4)	142(23)	87(14.1)	302(48.9)	4(1,5)
Executive members of GFA are competent	270(43.7)	192(31.1)	96(15.6)	37(5.9)	23(3.7)	2(1,5)
Executive members of GFA have gender equality	293(47.4)	105(17)	147(23.7)	32(5.2)	41(6.7)	2(1,5)
GFA operates in an open, transparent and accountable manner	367(59.3)	110(17.8)	78(12.6)	32(5.2)	32(5.2)	1(1,5)

Factors of satisfaction of football fans in Ghana

Path analysis was used to find factors affecting football fans' satisfaction and perceived performance of Black Stars. The WLSMV estimator outperformed other estimators in fitting the hypothesized model. It reported the lowest badness of fit indices such RMR (0.020) and SRMR (0.022) while it reported similar RMSEA (0.000) with other estimators. It also reported the best GFI metric and similar AGFI, NFI and CFI metrics with other estimators. Therefore, the results of the WLSMV estimator were explained. These metrics reported by WLSMV imply that the implied covariance matrix from the hypothesized relationships is not different from the observed covariance matrix, hence the model fitted the data accurately (Table 4).

From Figure 1, lack of coherence among players and poor technical teams have negative direct effects on the perceived performance of players (p-value=0.002) and satisfaction of football fans (p-value=0.015) respectively. Perceived call-ups to the team positively influenced the perceived performance of players (p-value=0.035). Perceived football governance (p-value<0.001) also positively influenced the perceived performance of the Black stars. The perceived performance of Black Stars influenced the satisfaction of football fans positively (p-value<0.001).

Lack of coherence among players (p-value=0.003) had a negative indirect effect on the satisfaction of football fans through the performance of Black Stars. Governance (p-value=0.001) had significant positive indirect effects on the satisfaction of football fans through the performance of Black Stars (Table 4).

Table 4. Direct and indirect effects of factors on satisfaction of football fans in Ghana.

Structural Paths			Direct effect	P-value	Indirect effect	P-value	Mediator
Performance	→	Satisfaction	0.5581	<0.001			
Training Facilities	→	Satisfaction	-0.089	0.187	0.098	0.097	Performance
Call Up	→	Satisfaction	-0.019	0.808	0.099	0.056	Performance
Governance	→	Satisfaction	0.099	0.266	0.205	0.001	Performance
Poor technical team	→	Satisfaction	-0.168	0.015			
Lack of coherence	→	Satisfaction	-0.059	0.414	-0.126	0.003	Performance

Training Facilities	→	Performance	0.169	0.084
Call -ups	→	Performance	0.170	0.035
Governance	→	Performance	0.352	<0.001
Poor technical team	→	Performance	0.080	0.299
Lack of coherence	→	Performance	-0.217	0.002
Lack of coherence	→	Training Facilities	-0.065	0.425
Lack of coherence	→	Governance	-0.117	0.221
Lack of coherence	→	Call- ups	-0.010	0.897

Fit indices

Estimators	RM SE A	RMR	SRMR	AGFI	GFI	NFI	CFI
ML	0.000	0.025	0.023	0.952	0.995	0.988	1.000
RML	0.000	0.025	0.023	0.952	0.995	0.988	1.000
WLSMV	0.000	0.020	0.022	0.978	0.998	0.984	1.000
GLS	0.000	0.031	0.024	0.966	0.996	0.978	1.000
ADF	0.000	0.084	0.025	0.984	0.998	0.985	1.000

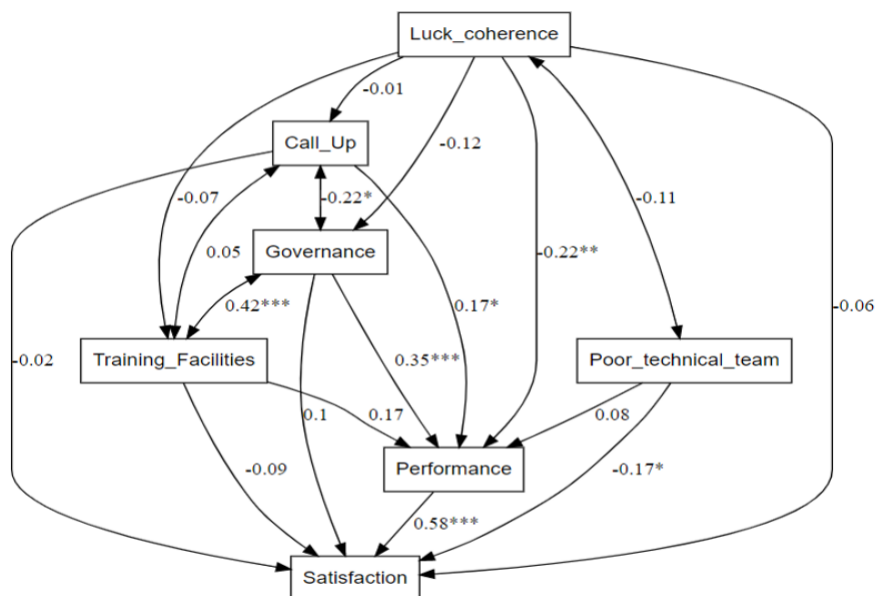


Figure 1. Factors of satisfaction of football fans in Ghana

DISCUSSION

The study examined the factors of satisfaction among football fans from the on-field performances of the Black Stars at the Qatar FIFA World Cup. It showed that lack of coherence among the Black Star team have contributed to poor performance leading to their exit, and 74.8% of the participants indicated this. The findings in this study fall in line with Acheampong (2022), and Tepeci and Onag (2014) study which also

showed that coherence among other factors in a sports team resulted in team performance. Again, this study revealed a poor technical team of the Black Stars also contributed to their poor performance and early exit from Qatar, and 68.1% of the participants indicated this. More so, the study revealed that 60% of the participants indicated poor tactic application by the coaches had contributed to the Black Stars' poor performances during the Qatar FIFA World Cup tournament. The study further revealed unavailability of the required medical team for the Black Stars has contributed mainly to the poor performance of the Black Stars and the early exit from group stages in the tournament, and this has created dissatisfaction (more than 67% of the sample) among football fans in Ghana.

These findings were similar to a research by the African Sports Centre for Data, Research and Technology (ASC) on the performance of the Black Stars during the AFCON 2019 tournament showed that the team lacked quality ball progression, adopted game plan, an effective defense structure and leadership under Coach Kwasi Appiah (Aboagye et al., 2021; Geelan 2022). This study agrees with the findings by Kim, Do Kim and Lee (2019) showing genuine leadership among coaches influence positively the psychological capital of athletes and resulted in their success of progression. Again, the findings from this study are also in tandem with Salcinovic et al. (2022), and Acheampong (2022) study which revealed how leadership style plays a critical role in team performance. Finally, this study showed the unavailability of the required medical team to cater for the health and injury concerns of the Black Stars also contributed to their poor performance and early exit from the FIFA tournament in Qatar. On the item of medical team unavailability, 65.9% of the participants indicated to this, and this also is akin to the findings of Kim, Do Kim and Lee (2019), and Salcinovic et al. (2022) as leadership is to ensure the provision of necessities for the effectiveness and efficiency of an organization or entity.

However, the study showed that the feature of Luiz Suarez did not contribute to the performance and exit of the Black Stars in Qatar, and also there was motivation among the team. From the study of McEwan (2019), and Sadigursky et al. (2017), social cohesion and collective efficacy influenced team performance. Social cohesion can be deduced from the power of relationships and solidarity among the team that can result in their sense of motivation. Even though this study has shown motivation among the Black Stars, it did not translate into performance as indicated by McEwan (2019) and Sadigursky et al. (2017). This could mean there may be other factors more pressing than motivation alone to contribute to team performance or success of progression in sporting tournaments.

Thus, the Ghana Football Association in collaboration with the Ministry of Youth and Sports and National Sports Authority, and the Parliamentary Select Committee on Sports should ensure a carefully selected coach/leadership for the national team, who will be succinct on player call-ups, offer enough training and bonding activities for team members, while demanding for adequate medical care and quality training facilities for the players as the team prepare for the 2026 FIFA World Cup and even the 2025 AFCON in Morocco.

Factors of Satisfaction among Football Fans on Black Stars Performance

The study further examined the factors that led to satisfaction among football fans in Ghana. The study showed that lack of coherence among players reduced the performance of players, while, the higher the perception of call-ups, the higher the

performance of the Black Stars. Good perceived football governance led to improvement in the performance of the Black stars. The higher performance of Black Stars led to improved satisfaction among football fans.

However, the poor technical team of the Black Stars reduced the satisfaction of football fans. Lack of coherence among players indirectly affect the satisfaction of football fans by compromising the performance of Black Stars. Call-ups, good governance and availability of quality training facilities indirectly improve the satisfaction of football fans by improving the performance of Black Stars indicated in Figure 1. Thus, the study revealed a model of satisfaction indicated in Figure 1 to serve as a guide for the GFA to consider in providing satisfaction for the fans of football in Ghana, thereby improving on the performance of the national team.

CONCLUSION

The study has shown that football fans in Ghana are receptive and follow Black Stars matches and recall their qualification games, particularly the 2010 South Africa FIFA World Cup stood out. The study has further shown the level of satisfaction among football fans in Ghana hinging on lack of coherence among the team, poor tactics from the coach, poor technical team and unavailability of the required medical team for the Black Stars have created dissatisfaction among the fans. Furthermore, the study findings indicated that good football governance, and good call-ups will improve the performance of the Black Stars. Therefore, poor technical team, training pitches, poor tactics from coaches, and lack of coherence among the team should be reconsidered at the GFA as it hinders satisfaction of fans and impede performance of the Black Stars.

We therefore conclude that the performance of Black Stars mediates the effects that training facilities, call-ups, governance and lack of coherence have on the satisfaction of football fans in Ghana. Based on the findings of this study, we recommend the following:

1. A robust overhaul of football governance at the Ghana Football Association.
2. The provision of quality training pitches and a modern sports stadium for the Black Stars.
3. The national coaches should develop training and activities for team members to bring about coherence on the field of play.
4. There is a need to begin comprehensive research and development at the GFA to better understand the needs of football fans in Ghana.

There is the need for the GFA to begin research and development among football fans in Ghana to better understand their needs and want as far as the field performances of the Black stars are concerned thereby offering satisfaction to football fans in Ghana. Again, there is a need to establish a comprehensive and robust medical team for the national team players. Transparency, accountability and openness to football stakeholders in Ghana is crucial. Otherwise, football fans will lose interest, which will stall football consumption and support, thereby affecting stadium attendance, sponsorship, endorsement, and development through sports in Ghana, thus this research.

The study has shown that football fans in Ghana are receptive and follow Black Stars matches and recall their qualification games, particularly the 2010 South Africa FIFA World Cup stood out. The study has further shown the level of satisfaction among

football fans in Ghana hinging on lack of coherence among the team, poor tactics from the coach, poor technical team and unavailability of the required medical team for the Black Stars have created dissatisfaction among the fans. Furthermore, the study findings indicated that good football governance, and good call-ups will improve the performance of the Black Stars. Therefore, poor technical team, training pitches, poor tactics from coaches, and lack of coherence among the team should be reconsidered at the GFA as it hinders satisfaction of fans and impede performance of the Black Stars.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

- Aboagye, E., & Rocha, C. (2019). Attending Ghanaian Football Matches: fan-Identification, On-Field Team Quality and Barriers. *European Sports Management Quarterly*. <https://doi.org/10.13140/RG.2.2.24139.95526>
- Aboagye, E., Adu, N., Yawson, J.A., Khalid, A-O., & Ernest, O.A. (2021). Football fans consumption media during Covid-19: The Ghanaian perspective. *International Journal of Education Research and Review*, 2(5), 53-60. <https://doi.org/10.5281/zenodo.5150153>
- Acheampong, E.Y. (2022). From a Ghanaian to an all-African perspective on the World Cup: history and fans' support. *Soccer & Society*, 23(7), 725-734. <https://doi.org/10.1080/14660970.2022.2108240>
- Adedia, D., Adebajji, A. O., & Appiah, S. K. (2020). Comparative analysis of some structural equation model estimation methods with application to coronary heart disease risk. *Journal of Probability and Statistics*, 2020, 1-15. <https://doi.org/10.1155/2020/4181426>
- Adedia, D., Adebajji, A. O., & Appiah, S. K. (2021). Calculating non-centrality parameter for power analysis under structural equation modelling: An alternative. *Pakistan Journal of Statistics and Operation Research*, 273-289. <http://dx.doi.org/10.18187/pjsor.v17i1.3148>
- Adewuyi, L. (2022, January 18). AFCON 2021: The fall of Ghana's Black Stars. <https://www.dw.com/en/afcon-2021-the-fall-of-ghanas-black-stars/a-60469116>
- Alidu, H., Adedia, D., Amidu, N., Luuse, A. T., Koryo-Dabrah, A., Bawah, A. T., ... & Nortey, E. N. (2022). Mediation effects of individuals' sexual quality of life on the relationship between sexual quality of life of partners and its predictors: a path analysis. <https://doi.org/10.55131/jphd/2022/200307>

- Ayamga, E. (2022, December 2). Ghana eager to avenge 2010 Uruguay World Cup defeat. <https://www.aljazeera.com/sports/2022/12/2/12-years-a-grudge-ghana-eager-to-revenge-dramatic-uruguay-defeat>
- BBC. (2016, July 16). How Africa Boycotted the 1966 World Cup. <https://www.bbc.com/news/world-africa-36763036>
- Contreira, A.R., Nascimento, J. J., Caruzzo, N.M., Costa, L., Gaion, P.A., Melo, S.V.A. & Fiorese, L. (2019). Basic Psychological Needs and Sports Satisfaction among Brazilian Athletes and Coaches: The Mediating Role of the Dyadic Relationship. *Front. Psychol.* 10:2543. <https://doi.org/10.3389/fpsyg.2019.02543>
- Cook, K.S., Cheshire, C., Rice, E.R.W., Nakagawa, S. (2013). Social Exchange Theory. In: DeLamater, J., Ward, A. (eds) Handbook of Social Psychology. Handbooks of Sociology and Social Research. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-6772-0_3
- De Villiers, O. (2022, November 21). Ghana at the FIFA World Cup: History, results, records, stats and top players. <https://olympics.com/en/news/ghana-at-the-fifa-world-cup-history-results-records-stats-and-top-players>
- Ertekin, B.A., & Avundunk, Y. (2021). The Relationship between Job Satisfaction and Job Performance: A Study on Sports Industry. *Journal of Education Issues*, 7(2). <https://doi.org/10.5296/jei.v7i2.18949>
- FIFA Annual Report. (2022). Football Unites the World: Annual Report 2022. Retrieved <https://digitalhub.fifa.com/m/2252cd6dfdadad73/original/FIFA-Annual-Report-2022-Football-Unites-The-World.pdf>
- Filho, M.A.B., Pedroso, C.A.M.Q., Miranda, Y.H.B., Sarmento, J.P., Silva, V.H.R., & Dias, C. (2021). THE INFLUENCE OF SERVICE QUALITY ON SATISFACTION AND BEHAVIORAL INTENTIONS OF FOOTBALL SPECTATORS: A STUDY IN PERNAMBUCO FOOTBALL. *Journal of Physical Education*, 32 (1). <https://doi.org/10.4025/jphyseduc.v32i1.3203>
- Fransen, K., McEwan, D., & Sarkar, M. (2020). The impact of identity leadership on team functioning and well-being in team sport: Is psychological safety the missing link? *Psychology of Sport and Exercise*, 51. <https://doi.org/10.1016/j.psychsport.2020.101763>
- Geelan, S. (2020, February 3). GHANA REPORT PART 1: A STATISTICAL AND TACTICAL ANALYSIS OF THE BLACK STARS UNDER KWASI APPIAH. Retrieved <https://ascafro.com/2020/02/03/ghana-report-part-1-a-statistical-and-tactical-analysis-of-the-black-stars-under-kwasi-appiah/>
- Genchev, S.E., Gray, G., & Wert-Gray, S. (2021). Male and Female Sports Fans: Team Identification, Satisfaction With Team Performance, and Consumption Behaviour. *Journal of Marketing Development and Competitiveness*, 15(2). <https://doi.org/10.33423/jmddc.v15i2.4329>

- Ghana Football Association. (n.d). Statement on Black Stars Exit from FIFA World Cup Qatar 2022 Finals. From <https://www.ghanafa.org/statement-on-black-stars-exit-from-fifa-world-cup-qatar-2022-finals>. Retrieved December 3, 2022.
- GhanaWeb. (2022, December 3). We regret our inability to progress – GFA on Black Stars exit from FIFA World Cup 2022. <https://www.ghanaweb.com/GhanaHomePage/NewsArchive/We-regret-our-inability-to-progress-GFA-on-Black-Stars-exit-from-FIFA-World-Cup-2022-1673882>
- Gray, G.T., & Wert-Gray, S. (2011). Customer retention in sports organization marketing: examining the impact of team identification and satisfaction with team performance. *International Journal of Consumer Studies*, 36(3), 275-281. <https://doi.org/10.1111/j.1470-6431.2011.00999.x>
- Jowett, S., & Arthur, C. (2019). Effective coaching: The links between coach leadership and coach-athlete relationship— From theory to research to practice. In M. H. Anshel, T. A. Petrie, & J. A. Steinfeldt (Eds.), *APA handbook of sport and exercise psychology, Vol. 1. Sport psychology* (pp.419–449). American Psychological Association. <https://doi.org/10.1037/0000123-022>
- Kim, M., Do Kim, Y., & Lee, H.-W. (2019). It is time to consider athletes' well-being and performance satisfaction: The roles of authentic leadership and psychological capital. *Sport Management Review*, 23 (5), 964-977. <https://doi.org/10.1016/j.smr.2019.12.008>
- McEwan, D. (2019). The effects of perceived teamwork on emergent states and satisfaction with performance among team sport athletes. *Sport, Exercise and Performance Psychology*. <https://doi.org/10.1037/spy0000166>
- Nartiyok, S. (2019). The Effects of Organizational Citizenship Behaviors of Hotel Employees on Job Performance: A Practice in Sivas province. *Journal of Tourism and Gastronomy Studies*, 7(2), 1057-1076. <https://doi.org/10.21325/jotags.2019.408>
- Opoku-Agyemang, L. (2005, October 14). Ghana: Black Stars Have Qualified for Germany 2006. <https://allafrica.com/stories/200510140778.html>
- Prayag, G., Mills, H., Lee, C., & Soscia, I. (2019). Team identification, discrete emotions, satisfaction, and event attachment: A social identity perspective. *Journal of Business Research*, 112, 373-384. <https://doi.org/10.1016/j.jbusres.2019.11.062>
- Rose, D. (2022, August 30). How many countries per continent qualify for 2022 Qatar FIFA World Cup? <https://fifaworldcupmania.com/how-many-countries-per-continent-qualify-for-2022-qatar-fifa-world-cup.html>
- Russell, C., Erica, L.A., Shanna, R.D., & Alison, V.H. (2016). Social Exchange Theory: A Critical Review with Theoretical Remedies. *Academy of Management Annals*, 11(1). <https://doi.org/10.5465/annals.2015.0099>
- Salcinovic, B., Drew, M., Dijkstra, P., Waddington, G., & Serpell, B.G. (2022). Factors Influencing Team Performance: What Can Support Teams in High-Performance

- Sport Learn from Other Industries? A Systematic Scoping Review. *Sports Med-Open*, 8, 25. <https://doi.org/10.1186/s40798-021-00406-7>
- Sadigursky, D., Braid, J.A., De Lira, D.N.L., Machado, B.A.B., Carneiro, R.J.F., & Colavolpe, P.O. (2017). The FIFA 11+ injury prevention program for soccer players: a systematic review. *BMC Sports Science, Medicine and Rehabilitation*, 18 (9). <https://doi.org/10.1186/s13102-017-0083-z>
- Skinner, J., Edwards, A., & Corbett, B. (2015). *Foundations of Sport Management: Research Methods for Sport Management*. Routledge publication.
- Tepeci, M., & Onag, Z. (2014). Team Effectiveness in Sport Teams: The Effects of Team Cohesion, Intra Team Communication and Team Norms on Team Member Satisfaction and Intent to Remain. *Social and Behavioral Sciences*, 150, 420-428. <https://doi.org/10.1016/j.sbspro.2014.09.042>
- Watson, R. (2015). Quantitative Research. *Nurs Stand*, 29(31), 44-8. <https://doi.org/10.7748/ns.29.31.44.e8681.PMID:25828021>
- Rosseel, Y. (2014). *Structural Equation Modeling with lavaan*. Bertinoro, Italy.