
Original Paper

Influence of Organizational Processes on Sustainable Sport Development of Commune of N'Djamena

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Abstract

For several years, the world has focused its attention on the Sustainable Development Goals for 2030. As a stakeholder in society, sport has proven to be an important tool for sustainable development as a vector of peace, tolerance, of respect and education. Thus, this global reach of sport in the city of N'Djamena is slow to establish itself as a determining tool in the service of sustainable development. This study examined the revised sustainability variables of the African Union sports policy that determines the development of sport in N'Djamena. The correlational descriptive survey research design was adapted in the study. Practical, purposive and simple random sampling techniques were used to select 411 respondents; while a self-developed questionnaire was used for data collection. The results showed that operational planning ($r=0.660$, $p<0.05$), resources ($r=0.572$, $p<0.05$), communication ($r=0.744$, $p<0.05$), sport Personal ($r=0.626$, $p<0.05$) and sports feedback and control ($r=0.758$, $p<0.05$) were independently tested to be significant on the development of sport in N'Djamena. The positive relationship between the sustainability variables of operational planning, resources, sports personnel, sports communication, and feedback and sports control implied that an increase in each of the variables would influence the development of sport in N'Djamena. Consequently, it is clear that the pillars of sustainability as cited in Agenda 21 must be further highlighted by those involved in the development of sport in N'Djamena. However, our results highlight the weak relationship between sustainability variables and the development of sport.

Keywords: sustainable development, sport

1. Introduction

For over a decade, the global community has been focused on the 2030 Sustainable Development Goals (SDGs), encompassing 17 ambitious targets designed to create a more equitable and sustainable world (United Nations, 2015). Within this framework, sport has emerged as a powerful tool for fostering social change (Coalter, 2011). Through its capacity to promote peace, tolerance, and mutual understanding, sport provides a unique platform for advancing societal well-being (Houlihan & Green, 2010). The United Nations Office on Sport for Development and Peace (UNOSDP) has played a pivotal role in championing sport as an enabler of the Millennium Development Goals (MDGs) and, subsequently, the SDGs (United Nations, 2015). Initiatives like the Youth Leadership Training Program highlight the transformative potential of sport by empowering young leaders to drive progress within their communities (Creswell, 2014). These efforts underscore sport's ability to unify diverse

populations and address pressing societal issues (Nicholson, Hoye, & Houlihan, 2010).

Despite these benefits, sport faces numerous challenges that hinder its effectiveness as a tool for development (Coalter, 2011). Issues such as racism, intolerance, and inadequate governance mechanisms undermine its potential (Henry, 2022). In many contexts, these challenges are further compounded by insufficient investment in infrastructure, limited policy coherence, and a lack of strategic planning (Moustakas & Işık, 2020). In the African context, the role of sport in sustainable development is particularly significant (Lindsey & Darby, 2019). The African Union's Agenda 2063 emphasizes the importance of sport as a means of fostering social cohesion, economic growth, and cultural preservation (African Union, 2020). However, the implementation of these objectives varies across the continent, with disparities evident in resource allocation, infrastructure development, and policy enforcement (Gabriel & Ihezue, 2021).

In Chad, and specifically in the capital city of N'Djamena, the development of sport remains a critical yet underexplored area (Abdalmadjit, 2018). While the African Union's revised sports policy highlights key sustainability variables—such as operational planning, resource management, and feedback mechanisms—their integration into local sports systems has been limited (African Union, 2020). This gap necessitates a comprehensive examination of the factors influencing sports development in the region (Moustakas & Işık, 2020). Operational planning serves as a foundational element for sustainable sports development (Creswell, 2014). It involves the strategic allocation of resources, the establishment of clear objectives, and the coordination of stakeholders (Green, 2005). In the absence of effective planning, sports initiatives often lack direction and fail to achieve their intended outcomes (Nicholson et al., 2010).

Resources, encompassing economic, material, and human assets, are another critical determinant of sports development (Coalter, 2011). The availability and efficient utilization of these resources directly impact the quality and accessibility of sports programs (Gabriel & Ihezue, 2021). However, resource constraints remain a significant barrier in N'Djamena, limiting the city's ability to implement comprehensive sports policies (Abdalmadjit, 2018). Sports personnel, including coaches, administrators, and technical staff, play a vital role in shaping the development of sport (Lindsey & Darby, 2019). Their expertise and commitment are essential for fostering talent, promoting inclusivity, and ensuring the sustainability of sports programs (Houlihan & Green, 2010). Yet, in many African contexts, the recruitment, training, and retention of qualified personnel present ongoing challenges (Henry, 2022).

Communication is another pivotal variable, facilitating the dissemination of information, the coordination of activities, and the engagement of stakeholders (Woolcock, 2001). Effective communication strategies can enhance public awareness of sports initiatives, mobilize support, and foster collaboration among diverse groups (Creswell, 2014). However, inadequate communication systems often impede the realization of these benefits (Coalter, 2011). Feedback and control mechanisms are essential for evaluating the effectiveness of sports programs and ensuring accountability (Green, 2005). These processes enable continuous improvement by identifying strengths, addressing weaknesses, and aligning initiatives with broader development goals (Moustakas & Işık, 2020). In N'Djamena, the absence of robust feedback systems has hindered the city's ability to optimize its sports policies (Abdalmadjit, 2018).

This study seeks to address these gaps by examining the relationship between sustainability variables and the development of sport in N'Djamena (African Union, 2020). By focusing on operational planning, resources, sports personnel, communication, and feedback, the research aims to provide actionable insights for policymakers, stakeholders, and practitioners (Creswell, 2014). Ultimately, the findings of this study have implications beyond N'Djamena, offering valuable lessons for other contexts where sport serves as a catalyst for sustainable development (Lindsey & Darby, 2019). By highlighting the critical role of sustainability variables, this research underscores the need for integrated and context-specific approaches to sports policy and practice (Houlihan & Green, 2010).

2. Method

A mixed method research design (a convergent parallel mixed method) that combines qualitative and quantitative design was used for this study. According to Creswell (2014), the strengths of qualitative and quantitative research designs can be harnessed and combined to deliver a better understanding of the research problems and research questions while also surmounting the limitations of individual study designs. Information was collected on dependent and independent variables in order to examine the influence of sustainability variables of operational planning, resources, sports personnel, sports communication, and feedback and sports control as determinants of development of sports in N'Djaména. The researchers adopted a mixed method because of the nature of the area that was studied. There was the tendency that the information that may be provided for the quantitative data may vary from those for the qualitative data. A mixed method was used to help to identify the differences and compare between the two responses.

This study involved a sample of 511 respondents, including sport managers, coaches, and athletes from the Ministry of Youth and Sports Development, Sports Councils in various states, and elite sports clubs. The Key Informant Interviews (KII) included three senior sports officials. The sampling was conducted using a multistage technique, with different methods applied at each stage: convenient sampling for zone selection, simple random sampling for selecting municipalities, purposive sampling for data collection, and snowballing for KII respondents.

Data collection involved both qualitative and quantitative methods. A self-developed questionnaire (Sport Organization Process and Sports Sustainability Variables Questionnaire) was used to measure the contribution of various factors (economy, rights-based sports, traditional games, the environment, and sports diplomacy) to sports development in N'Djaména. The questionnaire included 48 items scored on a 4-point Likert scale. For qualitative data, an open-ended interviewer-administered questionnaire was used.

The instruments were validated by experts, and reliability was assessed using the test-retest method, with coefficients of 0.791 and 0.784 for the closed and open-ended questionnaires, respectively. Field testing was conducted with a separate group of 20 athletes and coaches. Ethical approval was obtained, and informed consent was sought from participants, who were assured of confidentiality. Data collection was facilitated with a letter of introduction and research assistants. KII was used to gain insights from senior sports officials involved in the sports policy review. For data analysis, descriptive statistics were used for demographic data, while Pearson Product Moment Correlation and multiple regression were applied to test the research hypotheses. Qualitative data from the KII were transcribed and analyzed using content analysis to complement the quantitative findings.

2.1 Objectives/Research Hypothesis

The following objectives serves as guides to the successful completion of this study.

1. To determine the contribution of operational planning as a sustainability variable on the development of sport in N'Djaména.
- 2- To determine the contribution of resources (economic, material, human) as a sustainability variable on the development of sports in N'Djaména.
3. To determine the contribution of sports personnel as a sustainability variable on sports development in N'Djaména.
4. To determine the contribution of sports communication as a sustainability variable on sports development in N'Djaména.
- 5 To determine if the feedback and control of the activities carried out has significant contribution on the development of sport in N'Djaména.
6. To determine the composite contribution of operational planning, resources, sports personnel, sports communication, and feedback and sports control on sports development in N'Djaména.

2.1.1 Hypothesis

The following hypotheses were tested in this study:

1. There will be no significant contribution of operational planning of sports to the development of sports in N'djamena
- 2- There will be no significant contribution of resources (economic, material, human) to the development of sport in N'Djamena.
3. There will be no significant contribution of Sports personnel to the development of sport in N'Djamena.
4. There will be no significant contribution of sports communication to the development of sport in N'Djamena.
5. There will be no significant contribution of feedback and control of sports activities to the development of sport in N'Djamena.
6. There will be no significant composite contribution of operational planning, resources, sports personnel, sports communication, and feedback and sports control to the development of sport in N'Djamena.

3. Result

Demographic Data Analysis

Table 1. Distribution of the Respondents by Sex

Sex	Frequency	Percent
Female	168	40.9
Male	243	59.1
Total	411	100

Table 1 revealed that 168 (40.9%) of the respondents were female, while 243 (59.1%) were male. This implied that, most of the respondents were male.

Table 2. Distribution of the Respondents by Educational Background

Educational Background	Frequency	Percent
GCE Advance Level	150	36.5
Licence	190	46.2
MSc	54	13.1
PhD	17	4.1
Total	411	100

Table 2 revealed that 150 (36.5%) of the respondents had obtained Baccalauréat, 190 (46.2%) possessed Licence, 54 (13.1%) obtained MSc, while 17 (4.1%) had PhD. This implied that, most of the respondents had Licence.

Table 3. Distribution of the Respondents by Category of Stakeholders

Category of Stakeholders	Frequency	Percent
Sport managers	25	6.1
Coach	41	10
Technical staff	55	13.4
Athletes	267	65
Others	23	5.6
Total	411	100

Table 3 revealed that 25 (6.1%) respondents were sport managers, 41 (10%) were coaches, 55 (13.4%) were technical staff, 267 (65%) were athletes, 23 (5.6%) were others. This implied that, most of the respondents were athletes.

Table 4. Distribution of the Respondents by Work Experience

Work Experience	Frequency	Percent
1 - 5 years	149	35.3
6 - 10 years	131	31.9
11 - 15 years	98	23.8
16 years and above	33	9
Total	411	100

Table 4 revealed that 149 (35.3%) respondents had 1-5 years' work experience, 131 (31.9%) had 6-10 years, 98 (23.8%), while 33 (9%) had over 16 years. This implied that, most of the respondents had between 1-5 years.

Table 5. Distribution of the Respondents by Sports Involvement

Sports Involvement	Frequency	Percent
Athletics	46	11.2
Football	165	40.1
Handball	28	6.8
Tennis	68	16.5
Basketball	29	7.1
Volleyball	39	9.5
Others	36	8.8
Total	411	100

Table 5 revealed that 46 (11.2%) respondents engaged in athletics, 165(40.1%) involved in football, 28 (6.8%) engaged in handball. 68 (16.5%) respondents involved in tennis, 29 (7.1%) engaged in

basketball, 39 (9.5%) engaged in volleyball, while 36 (8.8%) involved in other sports. This implied that, most of the respondents involved in football.

Test of Relationship between each of the variables of sustainability (operational planning, resources, sports personnel, sports communication, and feedback and sports control) and the development sports in N'Djamena

Table 6. Correlation Analysis on relationship between Sustainability Variables and Development of Sports in N'Djamena

Variables	Development of sports	operational planning	Resources	Communication	sports personnel	feedback and sports control
Development of sport	1	.660**	.572**	.744**	.626**	.758**
operational planning	.660**	1	.262**	.411**	.275**	.585**
Resources	.572**	.262**	1	.825**	.671**	.678**
Communication	.744**	.411**	.825**	1	.586**	.690**
sports personnel	.626**	.275**	.671**	.586**	1	.456**
feedback and sports control	.758**	.585**	.678**	.690**	.456**	1

** . The correlation is significant at the 0.05 level.

N=411

Sig. (2-tailed):

Operational planning =0.000

Ressources=0.000

Communication=0.000

Sports personnel =0.000

Sport, feedback and control=0.000

The table 6 showed that operational planning ($r=0.660$, $p<0.05$), resources ($r=0.572$, $p<0.05$), communication ($r=0.744$, $p<0.05$), personnel sport ($r=0.626$, $p<0.05$) and sport feedback and control ($r=0.758$, $p<0.05$) were independently tested to be significant on sport development in N'Djamena. It has been established by the literatures that operational planning, resources, sports personnel, sports communication, sports feedback and control separately had a positive correlation with sports development in N'Djamena. Additionally, it was revealed in this table that the magnitude of the correlation coefficient of operational planning, resources, sports personnel, sports communication, and sports feedback and control were low respectively. The positive relationship between the sustainability variables of operational planning, resources, sport personnel, sport communication, feedback and sport control implied that an increase in each of the variables would influence the development of sport in N'Djamena. This means that in the field, the parameters of sustainability are not perceptible with regard to the results of our respondents. Consequently, it must be said that the pillars of sustainability as cited in Agenda 21 must be more emphasized by the actors of the development of sport in N'Djamena. This is apparent from the above results which demonstrate the weak relationship between the sustainability variables and sports development.

Hypotheses Tested

The following hypotheses were tested in this study:

Table 7. Regression Analysis of Relative Contribution of Sustainability Variables to Development of Sports

Variables	Unstandardized Coefficients		Standardized Coefficients	T	Rema-rk
	B	Std. Error	B $\hat{\alpha}$		
(Constante)	1.375	.155		8.860	Sig.
Operational planning	.290	.035	.231	8.271	Sig.
Sport et resources	.520	.056	.425	9.344	Sig.
Sports communication	.412	.032	.518	12.731	Sig.
Sports personnel	.565	.045	.368	12.653	Sig
Feedback and sport control	.646	.060	.386	12.653	Sig
Development of sport	.628	.117	.616	5.368	Sig

Hypotheses

H₀₁: There will be no significant contribution of operational planning of sports to the development of sports in N'Djamena

Table 7 showed operational planning, the unstandardized regression weight (β), the standardized error of estimate (SE β), the standardized coefficient, the t-ratio and the level at which the t-ratio was significant. As indicated in the table, operational planning ($\beta=0.231$, $t=8.271$, $p<0.05$) was independently tested significant on development of sports. It implied that operational planning significantly determined development of sports in N'Djamena. This means that there was a significant relative contribution of operational planning to the development of sports in N'Djamena. The null hypothesis was therefore rejected.

H₀₂: There will be no significant contribution of resources (economic, material, human) to the development of sport in N'Djamena.

Table 7 showed resources, the unstandardized regression weight (β), the standardized error of estimate (SE β), the standardized coefficient, the t-ratio and the level at which the t-ratio was significant. As indicated in the table, resources ($\beta=0.425$, $t=9.344$, $p<0.05$) was independently tested significant on development of sports. It implied that resources significantly determined development of sports in N'Djamena. This means that there was a significant relative contribution of resources to the development of sports in N'Djamena. The null hypothesis was therefore rejected.

H₀₃: There will be no significant contribution of Sports personnel to the development of sport in N'Djamena.

Table 7. showed Sports personnel, the unstandardized regression weight (β), the standardized error of estimate (SE β), the standardized coefficient, the t-ratio and the level at which the t-ratio was significant. As indicated in the table, Sports personnel ($\beta=0.368$, $t=12.653$, $p<0.05$) was independently tested significant on development of sports. It implied that Sports personnel significantly determined development of sports in N'Djamena. This means that there was a significant relative contribution of the Sports personnel to the development of sports in N'Djamena. The null hypothesis was therefore rejected.

H4: There will be no significant contribution of sports communication to the development of sport in N'Djamena.

Table 7 showed sports communication, the unstandardised regression weight (β), the standardized error of estimate ($SE\beta$), the standardized coefficient, the t-ratio and the level at which the t-ratio was significant. As indicated in the table, sports communication ($\beta=0.518$, $t= 12.731$, $p<0.05$) was independently tested significant on development of sports. It implied that environment significantly determined development of sports in N'Djamena. This means that there was a significant relative contribution of the sports communication to the development of sports in N'Djamena. The null hypothesis was therefore rejected.

H5: There will be no significant contribution of feedback and control of sports activities to the development of sport in N'Djamena.

Table 7 showed sports feedback and control of sports activities, the unstandardised regression weight (β), the standardized error of estimate ($SE\beta$), the standardized coefficient, the t-ratio and the level at which the t-ratio was significant. As indicated in the table, feedback and control of sports activities ($\beta=0.386$, $t=12.653$, $p<0.05$) was independently tested significant on development of sports. It implied that sports feedback and control of sports activities significantly determined development of sports in N'Djamena. This means that there was a significant relative contribution of feedback and control of sports activities to the development of sports in N'Djamena. The null hypothesis was therefore rejected.

H6: There will be no significant composite contribution of operational planning, resources, sports personnel, sports communication, and feedback and sports control to the development of sport in N'Djamena.

Table 8. Regression Analysis of Composite Contribution of Sustainability Variables to the Development of Sports

R=.904					
R ² =.818					
Adj.R ² =.815					
Std. Error=35083					
Model	Sum of squares	Df	Mean square	F	Sig.
Regression	223.640	5	44.728	363.395	.000
Residual	49.849	405	123		
Total	273.489	411			

As shown in table 8, it was found that the linear combination of sustainability variables (operational planning, resources, sports personnel, sports communication, feedback and sports control to the development of sport in N'Djamena) was tested significant on development of sports in N'Djamena ($F_{(44,728)}= 363.395$, $p<0.05$). The result yielded a coefficient of multiple regression of $R=0.904$ and multiple R-square of 0.818. The result also revealed that adjusted $R^2=0.815$. It implied that operational planning, resources, sports personnel, sports communication, feedback and sports control jointly and significantly determined development of sports in N'Djamena. This means that, there was a significant composite contribution of operational planning, resources, sports personnel, sports communication, feedback and sports control to the development of sport in N'Djamena. The null hypothesis was therefore rejected.

Findings on Qualitative Data

This section presents the results of qualitative data focused on sustainability variables (resources, operational planning, resources, sports personnel, sports communication, feedback and control) as

determinants of sports development in N'djamena. The objective is to show if these variables can determine the development of sport in N'djamena. Data was collected through an interview. The findings of this study are explained on resources, operational planning, resources, sports personnel, sports communication, feedback and control in relation to sports development under the following subheadings:

Sports development: The results of the qualitative analysis suggest that respondents perceive that sport in Ndjamena is not sustainable according to certain indices that they listed. Interviewee no. 1: “regarding the operational planning of sport in the Chadian capital, it should be noted that the Ministry of Sports and local authorities do not have their own Agenda 21 to be part of the sustainable development of sport. The infrastructures are not built according to international standards. We need a viable structure that can develop all sports in their entirety while respecting the pillars of development.

Interviewee no. 2: “We cannot really say that sport has developed because we do not feel the repercussions of Action 21 in the sporting field.” “...this is because the programs we have are not sustainable programs. This is the case with regard to competitions organized by federations and the financing of sporting activities.”

4. Discussion

The socio-demographic characteristics reveal through their results that most of the respondents were males and the majority of them were bachelor's degree holders, while most of the respondents were athletes. Additionally, most of the respondents had between 1 and 5 years of experience, while the majority of respondents were involved in football. Furthermore, the findings of this study on the relationship between sustainability variables and sports development revealed that operational planning, resources, feedback and control, communication and sports personnel were tested independently of significantly on the development of sport in N'Djamena. It was further established that operational planning, resources, feedback and control, communication and sports personnel separately had a positive correlation with sports development in N'Djamena. Furthermore, it was revealed that the magnitude of the correlation coefficient of resources was moderate, while operational planning, resources, feedback and control, communication and sports personnel remained low.

The positive relationship between the sustainability variables of operational planning, resources, feedback and control, communication and sports personnel implied that an increase in each of the variables would influence the development of sport in N'Djamena. The results of this study on the positive relationship between sustainability variables with the development of sport in N'Djamena according to Agenda 21. Baker *et al.* (2015) established a positive relationship between operational planning and sport development, stating that grassroots sport development and mass participation are based on physical activity planning. Also, a positive correlation was revealed between resources and the development of sport. This, corroborates with the findings of Chun-hua and Feng (2015) that stressed the importance of resources from sports activities in the development of the national economy due to the continued growth of societies and the increasing demand in the sports sector. In another sense, Oluwatoyin *et al.* (2021) in their analysis of the determinants of sustainable sports development, have shown the significant contribution of financing in sustainable sports development, as it is crucial for many other aspects, including the provision of infrastructure. On the other hand, disagreeing with the results of this study, Millington and Wilson (2016) establish a negative effect of sports development activities such as the construction of facilities in particular sports on the environment and its sustainability.

The findings of this study on the contribution of the resources to sports development revealed that resources has been independently and significantly tested for sports development. This means that there has been a significant relative contribution of the resources to the development of sport in N'Djamena. This implied that the financial resources situation had a strong impact on the level of development of sport in N'Djamena. The findings of this study on the relative contribution of economics to the development of sports in Nigeria were consistent with the findings of Yazid (2014). Following this author, Gabriel and Ihezue (2021) categorize financing as a main determinant of the development of sport; while the second suggests that improving the economy increases sports participation, which is an aspect of sports development. They recognize that the level of investment is a

strong marker of sports development, which can relate to sports facilities, coaching skills and sports science support programs. Muktar (2018) believes that the sports economy will allow private organizations to engage in sports entrepreneurship, thus multiplying the sources of financing necessary for the development of sport in the Chadian capital.

Sports communication is also a non-negligible factor that can increase the number of players around sports activity. It is to this end that interviewee no. 3 affirmed that "... the development of sport in N'Djamena must be based essentially on raising awareness among institutional and private actors and especially the popular masses..." It is for this purpose that the Ministry of Sports of Chad in a circular Chad adopted Law No. 001/PR/99 of January 11, 1999 considered that private organizations, through public-private partnerships, ensure the development of sport and its financing. This is also what emerges from the conclusions of the work of (Akarah, 2014). What emerges is a cause and effect relationship between sport and the economy in the development of sport. Sport has become an unparalleled vector of communication. "Sport offers brands interesting opportunities to communicate and unite their communities. Those who choose to support a sports project play a major role. At a time when institutions are resigning and have lost their credibility, brands are taking on a social responsibility. The results will be commensurate not only with the financial investment but with this issue and this associated responsibility" (Renié-Péreti & 2019).

The findings of this study on the contribution of resources and communication to sports development revealed a positive significance for sports development. The authors alluded to sports policy, funding and infrastructure as determinants of sports development, this is in tandem with the indices highlighted by Yazid (2014). The study investigated the capacity of the chosen determinants (sports policy, funding and infrastructure) to predicting sustainable sports development. The results following analysis revealed that sports funding had the most significant contribution to sustainable sports development as it is crucial to many other aspects including infrastructural provision as well as personnel, with the sports policy having the least.

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Concerning sports personnel, the results of this study on the composite contribution of sustainability variables to the development of sport in N'Djamena are in contradiction with the study by Gabriel and Ihezie (2021) which postulated that a combined effect of Investment in sport and human capital, political stability and a high population participation rate are necessary and sufficient for the development of sport. Sports infrastructure, when built in previous conflict zones, brings sport closer to people, helps reduce instability by targeting youth engagement, thereby reducing the risk of conflict; whilst sports facilities increase involvement in the practice of sport at a local level, playing a role in developing athletes for elite performance and overall sporting development.

The results of this study on the composite contribution of sustainability variables (personal planning, resources, communication, personnel and feedback) to the development of sport revealed that the linear combination of sustainability variables (economy, rights) were tested significantly on the development of sport in N'Djamena. This means that there has been a significant composite contribution of operational planning, resources, communication, personnel and feedback to the development of sport in N'Djamena. The results of this study on the composite contribution of sustainability variables to sport development are in contradiction with the study of Gabriel and Ihezie (2021) who postulated that a combined effect of investment in sport and human capital, political stability and a high population participation rate are necessary and sufficient for the development of the sport. This study takes a different route from previous research on the determinants of sport development, as there is little research on considering sustainability variables as determinants of sport development. These results align corroborate with Yazid's (2014) findings on the determinants which included sport financing, sport infrastructure, sport policy, sport programmes, sponsorship and personnel as determinants of sport

development.

Acquah-Sam (2021) in “Developing Sports for Economic Growth and Development in Developing Countries”, specifies determinants of sports development which were termed as “pillars” to include the establishment, and development and strengthening of relevant institutions; the development and maintenance of modern sporting infrastructural facilities; the training and development of sports administrators, instructors, coaches, trainers, and referees; the identification and development of talents; mentoring and role modelling; the promotion of international relations and linkages; sponsorships; the development of promotional programmes; the payment of adequate remuneration and construction of appropriate incentive packages; and the prevention of deadly sports disasters. Acquah-Sam (2021) argues that in the long term, these will be effective strategies in ensuring sports development in developing nations in Africa and ensure sports contribution to achieving economic growth.

5. Conclusion

After processing, analysis and interpretation of the results of the study, we came to the conclusion that operational planning, economic, material and human resources, sports personnel, the communication aspect and the control aspect of activities have a correlation significant with the development of sport in N'djamena. To this end, the efficiency and effectiveness of sustainability factors in the development of sport in N'djamena remains relative and moderately perceptible on the ground. Furthermore, the sustainable development variables in our study, namely operational planning, resources, personnel, communication, feedback and control, made a relatively significant contribution to N'djamena.

Recommendations

Based on the conclusions drawn from this study, the following the recommendations were made.

1. Integrate sustainable development courses into teaching programs at all levels of study to better assimilate the notion of sustainability in sport;
2. Raise awareness among institutional stakeholders on the establishment of a local sports policy for the development of sport, taking Agenda 21 and Agenda 2063 as a basis;
3. Encourage institutional and non-institutional actors to adopt the political direction of the AU for the sustainability of sport by developing strategies and national sports policy for the sustainability of sport and its development;
4. Raise awareness among sports personnel about discrimination and prejudice in sport, particularly at local level;
5. Organize awareness campaigns against gender-based violence which are variables in the development of sport;
6. Sports administrators and commissions should integrate New Information and Communication Technologies into their sports and sports-studies programs, granting them priority, importance, monitoring and equal allocations to guarantee greater participation in locally, encourage athlete development and elite performance;
7. The government should be strict with regard to feedback from stakeholders in associations and federations in the management of sports activities and infrastructures;
8. Require sports federations and commissions to carry out awareness-raising or communication actions around sports professions and gender-based discrimination;
9. Sports administrators should be open to the idea of organizing national competitions to give exposure to athletes at all levels.

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