

PERCEIVED INFLUENCE OF AI-ENHANCED MEDIA COVERAGE ON SPORTS PARTICIPATION AMONG PERSONS WITH DISABILITIES IN NORTH-WEST NIGERIA

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Abstract

The study assessed the impact of Artificial Intelligence (AI)-enhanced media coverage on sports participation among persons with disabilities in the North-West Zone of Nigeria. An ex-post facto research design was adopted. The population comprised 595 registered athletes with disabilities, from which a sample of 234 respondents was selected using stratified random sampling and simple random sampling within each stratum. Data were collected using a researcher-developed questionnaire. Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to analyze the data, while Chi-square statistics tested the null hypotheses at the 0.05 level of significance. A criterion mean of 3.0 was used for decision-making. The findings revealed that AI-enhanced print media coverage significantly influenced sports participation among persons with disabilities, with a calculated Chi-square value of 160.91. AI-integrated audio media coverage also had a significant influence, with a calculated Chi-square value of 117.28. Both calculated values exceeded the critical value of 9.49, leading to the rejection of the null hypotheses. The study concluded that AI-enhanced media coverage significantly enhances sports participation among persons with disabilities in the North-West Zone of Nigeria. It was recommended that government agencies and relevant stakeholders provide subsidized or free access to AI-driven audio and audio-visual media platforms. The study also recommended implementing digital literacy programmes and inclusive policies to improve accessibility, reduce technological barriers and encourage greater participation in sports among persons with disabilities.

Key words: Artificial Intelligence (AI), Media Coverage, Sport, Athletes, People with Disabilities

Introduction

The existence of sporting opportunities for persons with disabilities has significantly improved their physical fitness, self-esteem and socialization skills. In recent years, artificial intelligence (AI) has emerged as a transformative tool in enhancing these opportunities, particularly by revolutionizing how media content is produced, disseminated and consumed. AI technologies such as automated journalism, machine learning, predictive analytics and accessibility tools (e.g., real-time captioning and sign language avatars) are being employed to bridge the media inclusion gap for athletes with disabilities (Novack, 2024).

In today's society, sports and media maintain a deeply interconnected relationship where both continually influence each other. Kim and Park (2023) describe this interdependent phenomenon often referred to as sport media and the evolving symbiosis between athletic events and media platforms. With AI-integrated systems, this relationship has become even more dynamic, allowing for broader and more inclusive sports coverage.

The global broadcasting of events such as the Olympics and Paralympics, now enhanced by AI-driven personalization and real-time translation, has increased the visibility of athletes with disabilities and inspired broader participation. Kim and Park (2023) further emphasized that mass media, especially when powered by intelligent automation, plays a significant role in shaping sports culture and influencing the socialization process, particularly among marginalized groups. AI tools now curate adaptive content, push notifications and targeted exposure for Para sports, thereby influencing public attitudes and societal inclusion.

Internationally, the University of Illinois's International Disability Sport Outreach Program (IDSOP) and initiatives such as the Tanzanian Paralympic Committee's collaboration with the British High Commission illustrate how media and AI-driven platforms can amplify visibility. Even though Affleck (2023) noted minimal U.S. media presence at the 2012 London Paralympics, the BBC's incorporation of AI-based audience engagement tools showed a shift in attitude toward inclusive storytelling.

However, Paul and Roy (2023) observed that such intelligent coverage helps shape public discourse and encourage sports participation. Also, Ellis and Goggins (2024) also noted that AI-powered narratives on digital platforms generate strong public engagement with disability sports.

In Nigeria, despite the remarkable achievements of Paralympic athletes, media coverage especially with AI integration remains uneven. The 2018 NAWIS Conference at Ahmadu Bello University, Zaria, stressed the need for media outlets to adopt grassroots-oriented strategies and emerging technologies like AI to boost

the visibility of Para sports. However, in the North-West Zone, there remains limited empirical data on how AI-enhanced media coverage translates to increased sports participation among people living with disabilities. This study, therefore, seeks to assess the role of artificial intelligence in enhancing media coverage and promoting sports participation in this demographic and region.

Statement of the Problem

Despite legal advancements and increasing awareness about the rights of persons with disabilities, media coverage of their sporting endeavors remains inadequate, especially in Nigeria's North-West Zone. This shortfall persists even with the global rise of artificial intelligence tools capable of automating and diversifying media representation.

Historically, individuals with disabilities have faced marginalization, with societal beliefs often labeling them as unworthy of inclusion. In ancient Greece, infants born with physical disabilities were abandoned on Mount Taygetus. In pre-colonial Nigeria, harmful superstitions led to inhumane treatment only partially countered by reformers like Mary Slessor. These historical injustices continue to influence the social integration of people with disabilities and affect how the media represents them, especially in sports.

The researcher, serving as an officiating official during the 2009 KADA Games and the 2022 Delta Sports Festival, observed the exclusion of athletes with disabilities. Their eventual inclusion was only achieved through protests covered by traditional media highlighting the importance of timely and inclusive coverage. Yet, these media efforts are often slow, reactive and lack the intelligent, targeted outreach that AI can provide. Given this gap, it is crucial to explore how artificial intelligence can serve as a catalyst for more inclusive media practices that boost sports participation among persons with disabilities in the region.

Objectives of the Study

The purpose of this study is to assess the role of artificial intelligence in enhancing media coverage and promoting sports participation among persons with disabilities in the North-West Zone of Nigeria. Specifically, the study seeks to determine whether:

1. AI-enhanced print and digital media coverage affects sport participation among persons with disabilities in the North-West Zone.
2. AI-powered audio and broadcast media coverage influences the level of sports participation by persons with disabilities in the same region.

Research Questions

To guide this study on the role of artificial intelligence in enhancing media coverage and promoting sports participation among persons with disabilities in the North-West Zone of Nigeria, the following research questions are raised:

1. What is the impact of AI-enhanced print media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria?
2. What is the impact of AI-integrated audio media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria?

Research Hypotheses

In line with the research questions and to allow for empirical testing, the following null hypotheses are formulated:

1. There is no significant impact of AI-enhanced print media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria.
2. There is no significant impact of AI-powered audio media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria.

Methodology

This study adopted an ex-post facto research design, which is appropriate for investigating phenomena that have already occurred and where variables cannot be manipulated directly. The non-experimental nature of the study made this design suitable for assessing the role of artificial intelligence in enhancing media coverage and promoting sports participation among persons with disabilities in the North-West Zone of Nigeria.

The target population comprised individuals living with physical disabilities who are actively engaged in sports and are registered under the Offices of the Special Advisers (S.A) to the Governors of Kaduna, Katsina, Sokoto and Zamfara States. The total population across these states was 595 athletes. The focus on these specific states was to ensure that the findings reflect the regional characteristics of AI-enhanced media influence within the North-West Zone.

A sample size of 234 respondents was determined, consistent with the guidelines of Research Advisor (2006), which recommends a minimum of 234 for a population of approximately 600. A stratified random

sampling technique was employed to ensure proportional representation from each state. Within the strata, a simple random method (using YES/NO draws) was used to select respondents. The distribution across states was as follows: Kaduna State had 170 registered athletes with 65 sampled; Katsina had 130 athletes with 54 respondents; Sokoto had 145 athletes with 55 participants; and Zamfara had 150 athletes with 60 sampled respondents.

Data were collected using a structured, self-developed questionnaire designed on a five-point Likert scale: Strongly Agree (SA = 5), Agree (A = 4), Undecided (UN = 3), Disagree (DA = 2) and Strongly Disagree (SDA = 1). The questionnaire included items specifically targeted at measuring athletes' perceptions of AI-enhanced print and audio media coverage, as well as how these formats influence their participation in sports. The instruments underwent face, content and construct validity checks by experts in the fields of media studies, AI application and adaptive physical education.

To ensure ethical integrity and effective administration, three research assistants were trained on ethical procedures and data handling. Ethical clearance was obtained from relevant review boards and official permissions were secured from the Sports Councils in the selected states. Data collection was facilitated through collaboration with the Offices of the Special Advisers and the Planning, Research and Statistics (PRS) Units of the Sports Councils. Each respondent received a clear explanation of the study's purpose and verbal consent was obtained before participation.

The questionnaire administration lasted one week to minimize duplication and ensure quality responses. All 234 completed and validated questionnaires were retrieved for analysis. To determine the internal consistency of the instrument, Cronbach's Alpha reliability test was conducted, yielding a coefficient of 0.90, which indicates a high level of reliability.

For data analysis, descriptive statistics such as mean and standard deviation were used to answer the research questions. Furthermore, chi-square tests were employed to test the stated hypotheses at a 0.05 level of significance, allowing for the identification of any significant relationships between AI-enhanced media coverage and sports participation among persons with disabilities.

Results and Discussions

Basically, the findings of this study are presented in this chapter. The results were presented under the following sections.

Table 1 Analysis of the Demographic Characteristics of the Respondents

S/N	Variable	Frequency	Percentage	Cumulative percentage
1	Gender			
	Male	146	62.4	62.4
	Female	88	37.6	100.0
2	Age			
	18-25 years	46	19.7	19.7
	26 - 35 years	151	64.5	84.2
	36 years and above	38	15.8	100.0
3	Level of Professionalism			
	Amateur	82	35.0	35.0
	National	114	48.7	83.8
	International	38	16.2	100.0
4	Sports Participation Status			
	Para athlete	26	11.1	11.1
	Para soccer	78	33.3	44.4
	Wheel chair basketball	47	20.1	64.4
	Others	83	35.5	100.0
5	Level of Education			
	Primary	83	35.5	35.5
	Secondary	73	31.2	66.7
	Tertiary	49	20.9	87.6
	Others	29	12.4	100.0
6	Nature Of Disability			
	Amputees	9	3.8	3.8
	Cripples	182	77.8	81.6
	Survivor of poliomyelitis	43	18.4	100.0

(Field Survey, 20225)

Table 1 above showed that a total number of 146 (62.4%) were male, while a total number of 88(37.6) respondents were female. This analysis implies that majority of the respondents in this study were male.

With regards to the age of the respondents, 46(19.7%) were those respondents with the range of 18-25 years, 151(64.5%) were those respondents within the range of 26-35 years, whereas 37 (15.8%) were those respondents within the age of 36years and above. This shows that majority of the respondents were within the range of 26-35 years.

Similarly with regards to the level of professionalism of the respondents, 82(35.0%) were those respondents at the amateur level of professionalism, 114(48.7%) were those respondents who were national athletes, whereas 38 (16.2%) were those respondents who were international and elite athletes. This shows that majority of the respondents were national athletes.

Regarding the sport participation status of the respondents, 26(11.1%) were those respondents who participate in Para athletics, 78(33.3%) were those athletes who engage in para soccer, while 47 (20.1%) were those respondents who play wheel chair basketball. While 83 (35.5%) were respondents who partake in other sports. This analysis shows that majority of the respondents were athletes who play other games. On the level of education of the respondents 83 (35.5%) of them were those with primary school certificate only, 73 (31.2%) were those respondents with secondary school certificate holders, while 49 (20.9%) were those respondents with tertiary institution certificate holders. Whereas 29 (12.4%) were respondents with other kind of level of education. This shows that majority of the respondents were primary school certificate holders.

Similarly with regards to the nature of disability of the respondents, 9 (3.8%) were amputees by their nature of disability, 182(77.8%) were those respondents who were cripples by the nature of their disabilities, whereas 43 (18.4%) were those respondents who were survivors of poliomyelitis. This analysis shows that majority of the respondents in this study are those who were cripples by the nature of their disabilities.

Answering Research Questions

Question One: What is the impact of AI-enhanced print media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria?

Table 2: Analysis of the opinions of the respondents on the impact of AI-enhanced print media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria?

S/N	Items	SA	A	UD	D	SD	Mean	STD
1	AI-personalized sports magazines keep persons with disabilities informed and engaged in sports.	90	91	25	20	8	4.004	1.214
2	AI-curated sports articles in newspapers stimulate interest in sports among persons with disabilities.	105	79	30	10	10	4.107	1.454
3	AI-generated pamphlets provide accessible and relevant sports information to persons with disabilities, enhancing participation.	89	82	21	30	12	3.880	1.250
4	AI-driven sports posters help persons with disabilities acquire targeted information that influences their involvement in sports.	111	70	18	11	24	3.996	1.441
5	AI-powered sports books promote knowledge and motivate participation among persons with disabilities.	89	90	22	21	12	3.953	0.986
6	AI-customized poster cards are easily accessible and effective in promoting sports engagement for persons with disabilities.	113	69	22	18	12	4.081	1.181
Cumulative Mean							4.003	

Decision Mean = 3.0

The analysis presented in Table 2 reveals that AI-enhanced print media has a significant positive impact on sports participation among persons living with disabilities in the North-West Zone of Nigeria. The cumulative mean score of 4.003, which is higher than the decision benchmark of 3.0, indicates a general agreement among respondents that AI-driven print media platforms such as magazines, newspapers, pamphlets, posters, books and poster cards play an important role in motivating and informing individuals with disabilities about sports activities. Specifically, newspaper articles had the highest mean score (4.107), showing strong support for their effectiveness in arousing interest in sports among this population. Similarly, AI-customized poster cards (mean = 4.081) and AI-personalized sports magazines (mean = 4.004) were also rated highly, suggesting that accessible and targeted content through these media forms helps bridge the information gap and stimulate participation. Other media forms like sport pamphlets, posters and books also recorded favorable responses, with mean scores well above the decision point. These findings imply that the integration of artificial intelligence into traditional print media has enhanced the relevance, accessibility and appeal of sports-related information, thereby contributing significantly to increased sports engagement among persons with disabilities in the region.

Question Two: What is impact of AI-integrated audio media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria?

Table 3: Analysis of the opinions of the respondents on the impact of AI-integrated audio media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria?

S/N	Items	SA	A	UD	D	SD	Mean	STD
1	AI-personalized radio broadcasts on sports keep people with disabilities well-informed about competitions, encouraging participation.	88	70	32	32	12	3.812	1.128
2	AI-enhanced radio content creates awareness of the importance of sports participation among people with disabilities.	99	59	54	11	11	3.957	1.182
3	AI-automated sports radio broadcasts positively influence sports participation among people with disabilities.	89	71	45	19	10	3.897	1.390
4	AI-assisted audio cards are affordable and enable people with disabilities to engage in sporting activities.	91	66	31	26	20	3.778	1.308
5	AI-curated radio commentaries on sports events positively encourage participation among people with disabilities.	71	86	28	29	20	3.679	1.394
6	People with disabilities regularly listen to AI-enhanced radio sports programs, which stimulate their interest in participation.	85	88	20	20	21	3.838	1.195
Cumulative Mean							3.826	

Decision Mean = 3.0

Table 3 above showed clearly demonstrates that AI-integrated audio media coverage has a significantly positive impact on sports participation among people living with disabilities in the North-West Zone of Nigeria. With a cumulative mean score of 3.826, which is above the decision benchmark of 3.0, the responses indicate strong agreement among participants regarding the influence of AI-enhanced audio platforms particularly radio on encouraging involvement in sports.

The highest mean value (3.957) was observed in the item stating that AI-enhanced radio content creates awareness about the importance of sports participation, suggesting that targeted, intelligent content delivery effectively captures the attention and interest of this demographic. Similarly, statements regarding regular radio listenership (mean = 3.838) and the positive influence of AI-automated sports broadcasts (mean = 3.897) also received strong support, showing that radio remains a powerful and accessible tool for engagement.

Other responses, such as those on the affordability and usefulness of audio cards (mean = 3.778) and the encouragement received through radio commentaries (mean = 3.679), further reinforce the role of AI-driven audio media in fostering awareness, accessibility and motivation for sports involvement. Therefore, the findings suggest that integrating AI technologies into audio media platforms significantly contributes to improving sports engagement among persons with disabilities across the North-West Zone.

Hypotheses Testing

Hypothesis one: There is no significant impact of AI-enhanced print media coverage on sports

Participation among people living with disabilities in the North-West Zone of Nigeria.

Table 4: Chi-square statistics on the impact of AI-enhanced print media coverage on sports participation among people living with disabilities

Values	Observed	Expected	(O-E)	(O-E) ²	(O-E) ² /E	X ²	X ² Crit.	P-Value	df
SA	113	46.8	66.2	4382.44	93.64	160.91	9.49	0.000	4
A	69	46.8	22.2	492.84	10.53				
UD	22	46.8	-24.8	615.04	13.14				
D	18	46.8	-28.8	829.44	17.72				
SD	12	46.8	-34.8	1211.04	25.88				

X² cal = 160.91 X² cri = 9.49 P- Value = 0.000 level of sig = 0.05

Table 4 above showed the calculated chi-square (X²) value is 160.91, which is far greater than the critical chi-square value of 9.49 at a 0.05 level of significance with 4 degrees of freedom. The p-value is 0.000, which is less than 0.05, indicating strong statistical evidence against the null hypothesis.

Accordingly, the null hypothesis which stated that “there is no significant impact of audio media coverage on sports participation among people living with disabilities is therefore rejected.

Hypothesis Two: What is the impact of AI-integrated audio media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria?

Table 5: Chi-square statistics on the Impact of AI-integrated audio media coverage on sports participation among people living with disabilities in the North-West Zone of Nigeria?

Values	Observed	Expected	(O-E)	(O-E) ²	(O-E) ² /E	X ²	X ² Crit.	P - Value	df
SA	99	46.8	52.2	2724.84	58.22	117.28	9.49	0.000	4
A	59	46.8	12.2	148.84	3.18				
UD	54	46.8	7.2	51.84	1.11				
D	11	46.8	-35.8	1281.64	27.39				
SD	11	46.8	-35.8	1281.64	27.39				

X² cal = 117.28 X² cri = 9.493. P - Value = 0.000 level of sig = 0.05

Table 5 above shows the result of the Chi-square analysis reveals a statistically significant relationship between AI-integrated audio media coverage and sports participation among people living with disabilities in the North-West Zone of Nigeria. With a calculated Chi-square value of 117.28 exceeding the critical value of 9.49 at 4 degrees of freedom and a p-value of 0.000 (which is less than the 0.05 level of significance), the null hypothesis is rejected. This indicates that AI-driven audio media coverage has a significant positive impact on the level of sports participation among persons with disabilities in North-West Zone of Nigeria.

Discussion

Hypothesis One revealed that AI-enhanced print media coverage had a statistically significant positive impact on sports participation among persons with disabilities in the North-West Zone of Nigeria ($\chi^2 = 160.91$, $p < 0.05$). Consequently, the null hypothesis was rejected. This result is supported by Bala, Sulaiman and Garba (2023), who emphasized the role of AI-powered audio technologies such as smart radio and adaptive voice interfaces in promoting inclusive access to sports information. Similarly, Ibrahim and Abubakar (2024) found that voice-enabled AI systems increased sports awareness and engagement among PLWDs in rural areas of northern Nigeria. In contrast, Eze and Nwachukwu (2022) argued that while audio media is accessible, AI integration does not automatically lead to increased participation without complementary human-led community engagement. Also, Aliyu and Tanko (2021) posited that infrastructural deficits and digital illiteracy among PLWDs in remote areas limit the effectiveness of AI-enhanced audio media, thereby diluting its potential impact.

Hypothesis Two revealed that AI-integrated audio media coverage had a statistically significant positive impact on sports participation among persons with disabilities in the North-West Zone of Nigeria ($\chi^2 = 117.28, p < 0.05$). Therefore, the null hypothesis *was* rejected. The findings of the study was Supported by Abiola and Mohammed (2023) reported that smart TVs with AI-curated content and voice navigation features have broadened access to sports coverage for PLWDs. However, Salihu, Adamu and Lawal (2025) also observed that AI-assisted captioning, audio description and visual recognition tools increased participation and public engagement in para-sports within Kaduna and Sokoto states.

However, Chinedu and Yakubu (2023) cautioned that the cost and complexity of AI-integrated visual technologies may exclude many PLWDs who lack access to stable electricity or internet. Furthermore, Okon and Bello (2022) argued that over-reliance on AI tools risks neglecting culturally relevant, low-tech communication methods that are still highly effective in marginalized communities.

Conclusion

The study concluded that both AI-enhanced print media coverage and AI-integrated audio media coverage have statistically significant positive impacts on sports participation among people living with disabilities in the North-West Zone of Nigeria, resulting in the rejection of their respective null hypotheses.

Recommendations

On the basis of finding in this research the following recommendations are made:

1. Government bodies and media organizations should collaborate to expand access to AI-enhanced print media tailored for persons with disabilities (PWDs). This should include the production and distribution of accessible print materials, such as AI-supported Braille publications, large-print materials, and screen-reader-compatible digital publications, particularly in rural and underserved communities where access to inclusive information resources remains limited.
2. There is a critical need to implement capacity-building initiatives that focus on the effective use of AI-enhanced audio media among persons with disabilities (PWDs). Such programmes should equip participants with the skills to access and utilize AI-powered audio platforms, voice-assisted technologies, podcasts, and sports broadcasts, thereby improving their access to sports information and promoting greater participation in sports activities.

References

- Abiola, T., & Mohammed, L. (2023). AI-curated sports media and inclusive broadcasting in developing regions: A study of accessibility and engagement. *Journal of Emerging Media Technologies*, 18(2), 142–158.
- Affleck, R. (2023). *Media visibility of para-sports: The evolving role of AI in international sports coverage*. *International Journal of Disability and Media Studies*, 11(1), 33–47.
- Aliyu, H., & Tanko, M. (2021). *Digital exclusion and infrastructure challenges in AI-driven media access for persons with disabilities in Northern Nigeria*. *Journal of African Communication Studies*, 9(3), 201–217.
- Bala, A. A., Sulaiman, I. M., & Garba, M. S. (2023). *Smart radio and AI-audio tools: Bridging the information gap for disabled athletes in Nigeria*. *Nigerian Journal of Inclusive Technologies*, 6(1), 45–61.
- Chinedu, J., & Yakubu, K. (2023). *Challenges of AI-integrated visual media for persons with disabilities in underserved communities*. *Media Access and Inclusion Review*, 7(2), 78–91.
- Ellis, D. A., & Goggins, R. T. (2024). *Digital storytelling and AI-powered narratives: Building public support for para-athletes*. *Disability, Media and Society*, 15(1), 101–117.
- Eze, P. O., & Nwachukwu, B. C. (2022). *Limitations of AI-enhanced media in disability sports: A need for grassroots human engagement*. *West African Journal of Sports Development*, 4(2), 90–105.
- Ibrahim, M. B., & Abubakar, Y. A. (2024). *AI-driven voice tools and rural sports participation among PLWDs in Northern Nigeria*. *African Journal of Technology and Health*, 12(1), 67–79.
- Kim, H., & Park, J. (2023). *The evolving relationship between AI media systems and sports culture: A global perspective*. *Journal of Sport and Digital Innovation*, 10(4), 201–220.
- Novack, T. R. (2024). *AI for inclusion: Technologies empowering athletes with disabilities*. *International Review of Adaptive Technologies in Sports*, 9(3), 122–139.
- Okon, J., & Bello, S. (2022). *Cultural relevance and low-tech alternatives to AI in disability sports broadcasting*. *Nigerian Journal of Media Studies*, 13(1), 58–70.
- Paul, R., & Roy, S. (2023). *AI algorithms and sentiment analysis in disability sports: Impact on audience engagement*. *Journal of Digital Sports Analytics*, 8(2), 133–148.
- Salihu, M. U., Adamu, A. M., & Lawal, R. T. (2025). *AI-assisted captioning and gesture recognition in Para sports broadcasting: Implications for inclusion in Northern Nigeria*. *Disability and Technology Journal*, 14(1), 45–62.