



Legislation and Accessibility of Recreational Facilities: Comparative Analysis of the pre- and post-Act 715 Sports Stadiums in Ghana

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Received on: 20 Sep 2023 Accepted on: 15 Dec 2023

ABSTRACT

In addition to serving the core function of serving as venues for recreational and sporting activities, sports stadiums in Ghana are used as meeting places for political rallies, religious meetings, and other social gatherings due to the lack of large meeting venues. Participants of these gatherings include people with various degrees of accessibility needs like the PWDs, the elderly, children, pregnant women, and children. Five of the stadiums in Ghana are considered large and of international standards and therefore used for competitions organized by the FIFA and Confederation of African Football (CAF) football and Association of African Sports Confederations (AASC) for athletics etc. Four of these stadiums were constructed before the introduction of Ghana's Disability Act – Act 715 in 2006 which sought to make all public facilities disability friendly. The Cape Coast Sports Stadium was however built 10 years after the introduction of the Act. This paper seeks to conduct a comparative accessibility analysis of the five stadiums to determine whether there were any improvements in the design, construction, and usage of Sports Stadiums in Ghana after the introduction of the Act. The results revealed that there has only been a slight and insignificant improvement in the accessibility of the stadiums since the introduction of the Act.

Keywords: Legislation, Building Codes, Guides, Standards, accessibility, Persons with Disabilities, Stadium.

INTRODUCTION

According to the World Health Organization (WHO), around 15% of the world's population lives with a disability, and this proportion is predicted to rise owing to an ageing population and a rise in chronic health disorders (WHO, 2011). Disability is projected to affect roughly 10 percent of the population in Ghana, with physical disability being the most prevalent kind (Ghana Statistical Service, 2013). It is therefore essential to ensure that the built environment is accessible so that people with disabilities may move around freely and participate fully in society (GSA, 2016). One way of achieving this is the passage of legislation in the form of laws, building codes, accessibility standards, etc. to regulate and monitor the activities of the built environment. The concept of accessibility may be enshrined in a statute or an international agreement and then further defined in accordance with binding or optional international or national rules or norms. This then becomes the norm, the acknowledged standard of quality (WHO, 2011a). These laws, policies, and protocols guide

the development of inclusive and accessible built environments in their various jurisdictions. Some are binding, others are not.

A lot of studies have been conducted on the legislation of and the accessibility to the built environment in Ghana (Amos-Abanyie, S. et al. 2012, Asante and Sasu, 2015, Danso and Tudzi, 2015, Ansah and Owusu, 2012, Tudzi et al. 2017) but practically little has been done on with the legislation and accessibility of recreational facilities like stadiums. It is against this background that this paper seeks to:

Review the development of legislation on the accessibility of the built environment in Ghana.

Determine critical factors prescribed by international legislation for the accessibility of sports stadiums.

Conduct a comparative analysis of the accessibility of stadiums built pre and post-Act 517 in Ghana;

Determine whether the introduction of accessibility legislation has had any impact on the design, construction, and usage of sports stadiums in Ghana.

Role of Legislation, Standards, Guides And Codes in the Accessibility of the Built Environment

Legislation is the act of making or enacting laws, and legislation governing persons with disabilities are very many worldwide. The Americans with Disabilities Act (ADA), which was passed by the US Congress in 1990, was a response to the issue of discrimination against the disabled. Australia and the United Kingdom followed suit with their versions of the

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Cite as: Danso, A. K., Owusu-Manu, D. G., Agyekum, K., Acheampong, A., & Acheamfour, V. (2024). Legislation and Accessibility of Recreational Facilities: Comparative Analysis of the Pre-and Post-Act 571 Sports Stadiums in Ghana. *Journal of Disability Studies*, 11(1), 34-44.

©IS Publications ISSN: 2454-6623 <http://pubs.iscience.in/jds>

Disability Discrimination Act (DDA) in 1992 and 1995, respectively (Otmani et al., 2009). The Equality Act, which replaced the Disability Discrimination Act of 1995 in the United Kingdom, was passed in 2010. Little (1995) asserted that their main objectives were to make the built environment accessible to individuals with disabilities, to offer them equal employment possibilities, equitable access to public transit, the possibility to attend education, and the chance to qualify for social security benefits. Duggan (2006) posits that the Disability Equality Duty (DED), which also resulted from the Disability and Discrimination Act, aims to compel all those responsible for the design, management, and upkeep of the built environment to make sure that PWDs have a full voice in obtaining the benefits of and influencing an inclusive built environment. Various countries took a further step by creating accessibility codes and standards to direct the design and construction of accessible built environments and guarantee the application of pertinent legislation. These accessibility codes include the Americans' Disabilities Act (ADA) Standards for Accessible Design of 2010, The Australians' Disability (Access to Premises - Buildings) Standards 2010 (Premises Standards Act), and the British Standard BS 8300 (2001): Design of Buildings and its Approaches to Meet the Needs of Disabled People.

Africa and other nations in the Global South have also tried to stay up with these advances of legislation of accessibility to the built environment where some countries, including Kenya (2007), Namibia (2004), Botswana (1996), Malawi, and Nigeria (1993) have enacted Persons with Disabilities legislation and Uganda (UNAPD, 2010), Egypt (Samad, 2010), and South Africa (CHRC, 2006) have produced their Accessibility Codes. Like the others, these legislations also seek to make the built environment accessible to PWDs.

Development of accessibility legislation in Ghana

The absence of legislation and accessibility design standards in Ghana in the past compelled consultants and construction pioneers in Ghana to resort to international standards like BS 8300 (2001), ADA (2010), and (Solidere, 2004) in their quest to provide accessible facilities (Danso and Tudzi, 2015) but with time, civil society and the national umbrella organisation for PWDs, the Ghana Federation of the Disabled (GFD), whose members include the Ghana Association of the Blind (GAB), Ghana National Association of the Deaf (GNAD), Ghana Society of the Physically Disabled (GSPD), Society of Albinos Ghana (SOAG), Parents Association of Children with Intellectual Disability (PACID), and Share Care Ghana (SCG) joined the fight for PWDs' rights. In response, the government included clauses protecting PWD rights in its 1992 constitution and followed it up with the Persons with Disability Act 715 which was presented to Parliament for consideration in 1993, and after much deliberation, was approved on June 23, 2006. Ghana in her Constitution guarantees the rights of all manner of persons including PWDs (Article 17) and provides for PWDs to be able to access public places (Article 29). It is also party to international protocols like the UN CRPD (2006) and the African Charter on Human and Peoples' Rights (ACHPR) that guarantee

the rights of PWDs. Clause 6 of Article 29 of the 1992 Constitution of Ghana also states that "As far as practicable, every place to which the public have access shall have appropriate facilities for disabled persons." Act 715 of 2006 also intends to offer disabled persons unrestricted access to public places and buildings which invariably include recreational facilities like stadiums (Persons with Disability Bill, 2006). Apart from Act 715, other laws in Ghana address some issues on PWDs, such as the Children's Act 560 of 1998; Sections 3 & 10 and the Labour Act 651 of 2003; Sections 3(e) & Section 14(e). After Act 715 of 2006, the Ghana Standards Authority (GSA) also introduced an accessibility standard known as the Building and Construction Materials Accessibility Standard for the Built Environment (GS 1119: 2016) to advocate for and enforce accessibility in Ghana (GSA, 2016).

Although attempts to provide accessibility legislation in various jurisdictions must be lauded, experience has shown that their provision alone is not an antidote to the problem. Baris and Uslu (2009) posited that in Turkey, accessibility legislation of the built environment has mostly remained on paper. In Ghana, various researchers (Asante and Sasu, 2015, Ansah and Owusu, 2012 Tudzi et al. 2017) have also argued that the enactment of similar legislation in Ghana has not improved the accessibility of the built environment in Ghana because many post-2006 buildings remain inaccessible to PWDs. In Africa, the Uganda National Action on Physical Disability and Ministry of Gender, Labour and Social Development (2010) observed that most African and other countries in the Global South that do have accessibility regulations have not been able to have the desired impact (UNAPD, 2010). This is because the monitoring and enforcement of these regulations are lacking mainly because apart from Namibia, most of the other African countries including Ghana had no liability clauses in their legislation for construction professionals who design and construct these facilities (Table 1).

Schedule 3.4 of the Namibia National Policy on Disability (2004) makes it mandatory for construction professionals in Namibia to adhere to the disability policy, and failure to comply would attract sanctions. According to Asante and Sasu (2015), this serious omission in Act 715 of Ghana is at the root of the problem of inaccessibility in the Ghanaian built environment and so Ghana's Act 715 might never be able to achieve its planned objectives because owners and occupiers of facilities are usually just financiers while these construction professionals are generally the advisers, designers, and builders of the built environment who are responsible for decision making (Kadir and Jamaludin, 2012).

Apart from enforcement, other measures such as clarity, revision and harmonisation of legislation, and retraining of construction professionals, etc. ought to be improved if inclusiveness is to become a reality. For instance, in the area clarity and harmonisation of legislation, Dodd (2017) argues that British legislation requires that "service providers make reasonable adjustments (or make accommodations) to eliminate physical barriers", but the meaning of reasonable adjustment is

Table 1: Measuring Act 715 against Other Disability Legislations, Policies, and Conventions

Country/Legislation	Provision(s)			
	Women with Disability (WWD)	Housing for PWDs	Voting Rights of PWDs	Liability of Construction Professionals
Persons with Disability Act, 2006 (Act 715) (Ghana)	None	None	None	None
United Nations Convention on Rights of Persons with Disability (2008)	Article 6 recognizes WWD as subject to multiple discrimination.	Article 28(2d) ensures access by PWDs to public housing programmes.	Article 29(a)(iii) guarantees the free expression of the will of PWDs as electors and where necessary allows voting by proxy	None
Nigerians with Disability Decree, 1993 (Nigeria)	None	Section 7 makes a provision of not less than 10% of all public houses	Section 13 says PWDs shall have the right to vote either in person or by proxy and polling stations and shall be made available and accessible to PWDs.	None
Persons with Disabilities (Amendment) Act, 2007 (Kenya)	Section 6 recognizes WWD as subject to multiple discrimination	None	None	None
National Policy on Disability, 2004 (Namibia)	Schedule 2.5.1 ensures that WWD have equal opportunity to participate in all aspects of life	Schedule 3.8.4 ensures the provision of and access to housing for PWDs is made.	None	Schedule 3.4 ensures that construction professionals have access to the disability policy and the requirements for making places accessible to PWDs.
National Policy on Care for People with Disabilities, 1996 (Botswana)	None	Schedule 4.3.1.4 ensures that any development of land has provision for PWDs	None	None
National Policy on Equalisation of Opportunities for Persons with Disabilities (Malawi)	Schedule 2.4.10 acknowledges that WWD experiences greater discrimination and higher levels of exclusion from mainstream society.	Schedule 4.11.1 ensures that there is improved access to adequate housing for PWDs	Schedule 2.4.9 recognizes that PWDs are frequently denied their fundamental right to participate in national elections.	None

Source: Asante and Sasu (2015)

ambiguous. Although the EHRC (The Equality and Human Rights Commission) admits that the definition of the term is vague and “what is reasonable may vary according to the type of service and the nature of the service provider, its size and resources”, and that while the law employs the phrase to allow different solutions in different situations, the final interpretation of such clauses has been vested in the courts (EHRC, 2012). Secondly, in the UK, builders for instance have very little or no contact with PWDs because they are not required by law to consult directly with PWDs over development proposals and are therefore uninformed about the needs of PWDs which could enable them to make those reasonable adjustments. This, therefore, calls for changes in the attitudes, policies, and practices of many professionals in the built environments through

retraining if inclusive design is to be achieved. On harmonization of legislation, Asante and Sasu (2015) questioned the level of commitment of African governments to addressing matters of disability for their reluctance to periodically revise their legislation to ensure consistency with other international legislation. They disclosed that it is surprising that although many African countries including Ghana duly supported, adopted, and championed the United Nations Convention on the Rights of Persons with Disability (UNCRPD) into existence, they are yet to amend and align their disability legislation with the UNCRPD. In Ghana, all attempts at convincing the government to commence the process to amend Act 715 to ensure its alignment with the UNCRPD have fallen on deaf ears (Asante and Sasu, 2015). On the question of resource allocation, Rapley (2013)

emphasized that while governments may articulate “exceptional” accessibility legislation and technical standards, inadequate resource allocations may hamper the efforts of awareness creation, implementation, monitoring, and proper evaluation of outcomes accomplished, and conducting post-occupancy studies among end users thereby reducing the expected impact on the accessibility of the built environment. On the other hand, better results are achieved when governments adopted “normal” legislation but provided the needed resources support, and coordination.

Legislation and Factors Required for Accessibility of Stadiums

Wikipedia defines a stadium as a place or venue for (mostly) outdoor sports, concerts, or other events and consists of a field or stage either partly or surrounded by a tiered structure designed to allow spectators to stand or sit and view the event. Most of the plethora of earlier mentioned legislation also deals with the accessibility of sports stadiums. According to Hums et al. (2016), the ADA proscribed discrimination against PWDs in public places such as lodging, restaurants, entertainment facilities, retailers, transit, recreation, schools, and many others. The recreation centers include the realm of sports which comprises observing and participating in sports and accessing the full range of athletic venues such as stadiums, gymnasiums, health clubs, etc. In Europe, football clubs focused on removing physical obstacles by modifying club infrastructure because European legislation is highly affected by the social model of disability (European Commission, 2011; LPF, 2015). This was done to expand access for disabled supporters (Penfold and Kitchin, 2022). However, more recent empirical research on disabled football fans revealed that many English football clubs maintained a very limited understanding of access and inclusivity for disabled spectators (Garcia et al., 2017). This is even though football-based inclusion policy heavily draws on the social model of disability. In their study, Paramio-Salcines & Kitchin (2013) investigated the implementation of disability legislation by systematically studying how services were construed and executed by football governing bodies and clubs in European football powerhouses like the UK, Spain, and Germany. They discovered that access had been hampered by the way issues on accessibility are handled in the UK.

In the UK all sports facilities were to comply with Part M (Access and Facilities for Disabled People) of the Building Regulations. Although The Accessible Stadia Guide (2003) is an advisory document, it is also a user-friendly and successful technical document that is part of the British Building Regulations (Part M) that encourages the coordination of accessibility legislation, especially standards for the benefit of spectators who are PWDs. The document whose goal is spectator equality and inclusion clearly defines the standard of facilities expected for a modern stadium for professionals who are involved in stadium design and management. Furthermore, it focuses on the design and provision for disabled spectators at stadiums and their particular needs, the removal of physical barriers, facility improvements at existing stadia, and well-

considered design solutions at new stadiums to create and provide more inclusive facilities and accessibility for all people who attend and spectate. It also inspired the European Technical Report CEN/TR 15913, "Spectator facilities: Layout criteria for spectators with needs," which was released by the European Committee for Standardization (CEN) in 2009 for stadiums in Europe. All the above legislation has made it mandatory for some locations, both current and proposed, to have an "access plan or strategy." With time, some stadiums have been designed and built such that spectators are given easy access seats with wider legroom, armrests, backrests, etc., and more room in addition to wheelchair-user accommodations.

The new Wembley, the Allianz Arena, and Old Trafford (home of Manchester United) are several outstanding examples of easily accessible stadiums. The provision of facilities to meet the requirements of disabled spectators inside stadiums in Britain and Europe is still being led by Manchester United (Paramio et al, 2008). According to Kitchin (2013), the Arsenal football club has also been able to design the Emirates Stadium to cater to their disabled supporters. Managers and owners of such facilities are expected to ensure that access audits to evaluate their facilities and services are carried out by qualified parties continuously to ensure current and future compliance with the Equality Act of 2010 which places an evolving and anticipatory duty on service providers (i.e., sports clubs, stadium management, etc.) (SGSA, 2015).

The DDA also prohibits discrimination against PWDs in all sports facilities by service providers (football clubs, stadiums management, etc.), and from October 2004, they were not only expected to continually conduct audits of these premises but also make structural changes to their premises (including stadiums) to overcome physical barriers which will include the removal of all features, or altering them so that they no longer have those effect, or providing reasonable means of avoiding them or providing reasonable alternative methods of making the services available. These physical barriers can include features arising from the design or construction of the building; features on the premises including approaches to the site; fixtures, fittings, furnishings, furniture, equipment, and materials on or brought onto the premises; features on land associated with the premises (Accessible Stadia, 2003).

BS 8300:2001 was introduced in October 2001 to replace all existing British Standards and it highlights the concept of sightlines at stadiums where wheelchair spectators should be able to see events even when other spectators stand up in front of them. Several Guides to Grounds have also been published over the years in the UK; among them are “The Football Trust National Guide to Facilities for Disabled Football Spectators”, “A Guide to Grounds for Disabled Football Supporters”, “Access to Football Grounds” and Accessible Stadium Guide which were published in 1997, 2001/2, 2003 and 2016 respectively. The Fourth Edition of The Guide to Safety at Sports Grounds, 1997 (Green Guide) defined a large stadium as a newly constructed facility with a seated capacity of 10,000 or more. It guides circulation, signage, viewing accommodation, public address

system, staff training, tactile flooring indicators, and means of escape for disabled spectators. Accessible Sports Stadia Design Guidelines (2016) on the other hand can be employed when designing any scale of stand or ground, including new sports grounds, new stands built at existing sports grounds, and wherever possible, the extension and renovation of existing stands. By applying these guidelines, stadium operators can guarantee that PWDs will have a quality spectator experience, and with time increase the number of PWDs regularly attending sporting events. This should be so because every disabled person has the right to participate in all aspects of life and be committed to building a more inclusive society where people with disabilities have the same opportunity as non-disabled people to lead a full, active, and healthy lifestyle through sport and active recreation.

METHODOLOGY

The quantitative research method was adopted to gather numerical data from a survey for suitable statistical analysis and comparisons so that a phenomenon can be measured (Creswell 2014, Smith 2007) and in this case to confirm whether the passage of Act 715 had improved access to Ghanaian Sports Stadiums. Electronic databases and web-based search engines were searched using keywords and synonyms for accessibility, legislation, stadium, and PWDs. This search yielded about 40 accessibility legislation including guidelines, standards, codes, etc., out of which 24 were used to generate 32 parameters/items which are required to make a Sports Stadium accessible to PWDs (Table 2). This method has been used in several accessibility studies (Calder et al., 2018, Downs and Black, 1998, McClain et al., 1993; Losinsky et al., 2003). The checklist was then used to audit the facilities in the five stadiums which were divided into two groups; pre - Act 715 (2006) stadiums which consisted of four stadiums; The Accra Sports Stadium (ASS), Kumasi Sports Stadium (KSS), Tamale Sports Stadium (TSS) and the Sekondi-Takoradi Sports Stadium (STSS) that were constructed before the introduction of the Act and post - Act 715 (2006) stadiums that had the Cape Coast Sports Stadium (CCSS) - the only stadium constructed after the introduction of the Act.

A pilot test by a Consultant with over 30 years of experience in industry and academia was conducted to verify items on a designed checklist by observing, measuring, and evaluating the shortlisted elements to determine the presence or absence of issues that may deter or thwart the use of the stadium's facilities by PWDs. Observations made during the pilot test on the problems and the hazards involved in the use of the facilities were documented and later discussed with a team of ten final-year students. Two of these selected students, the participants, were placed in five groups to conduct the actual audit in the stadiums. It must be mentioned that portions of the data used for the Pre-Act 715 stadiums are similar to those in Danso et al (2023)

The data collection was done within the five stadia by the participants using a five-point Likert scale of [1 = poor/facility not provided; 2 = Satisfactory/most requirement met; 3 = fair/equal number of requirements complied and not complied; 4

= Good/most requirements are met; 5 = Excellent/All requirements are met]. The data collected was checked to ensure completeness, accuracy, and consistency for purposes of data validation (Loo and Jonge, 2020). Microsoft Excel (v. 2016) and Statistical Package for Social Sciences (SPSS) were used to analyze the collected data. The analysis was done using both descriptive and inferential statistics. The descriptive statistics involved the use of mean scores and standard deviation. The mean scores provided the central tendencies for each variable while the standard deviation provided the level of spread of the stadium ratings. A score of 3 was considered Fair on the Likert scale so in treating the mean scores (M) which were to 2 decimal places, $M \leq 2.50$ was considered below Fair and therefore non-compliant, $2.50 < M < 3.50$ was considered as Fair and moderately compliant and $M \geq 3.50$ was considered to be above Fair and very compliant with the provisions of the Standards. Finally, Logistics Regression was adopted to ascertain the statistical significance of the improvement or otherwise of the accessibility to the stadiums since the passage of the Act.

RESULTS AND DISCUSSION

Pre-Act 715 (2006) Sports Stadiums

Accra (Ohene Djan) Sports Stadium (ASS)

The stadium (ASS) which was constructed and inaugurated in 1962 in Ghana's capital city of Accra, was later renamed after Ghana's first Director of Sports - Ohene Djan and subsequently refurbished twice for the 1978 and 2008 CAN tournaments in Ghana. In the latter renovation, the stadium underwent extensive face-lifts and expansions where it was reconstructed, updated, and brought up to date to conform to FIFA standards. The stadium now has a capacity of up to 40,000 spectators and serves as the home ground for football teams like Hearts of Oak and Great Olympics.

Kumasi (Baba Yara) Sports Stadium (KSS)

Kumasi (Baba Yara) Sports Stadium (KSS), like all the other CAN 2008 stadiums is a multi-purpose stadium used not only for football matches but also for athletics, political rallies, religious gatherings, and other social and recreational activities. It is Ghana's largest stadium, with a seating capacity of 40,528. The stadium which was originally built by the United African Company (UAC) in 1957 as a football pitch is the home of Asante Kotoko, one of Africa's most revered football clubs. It was renamed after one of the club's footballers - Baba Yara in 2004. Although the first stands were constructed in 1971, the entire stadium was refurbished in 1977 for the 1978 edition of CAN in Ghana. The third and last major works took place just before the CAN 2008 tournament where the west stand was demolished and replaced by a two-tier stand with the press, corporate, and VIP facilities. Furthermore, the rest of the stands were upgraded, seats were added, and transparent panels were installed to separate the spectator area from the playing area to prevent pitch invasions.

Tamale (Alhaji Aliu Mahama) Sports Stadium (TSS)

Work started on this stadium in January 2006. Renamed after the late Vice President of Ghana, the Tamale Sports Stadium (TSS) was originally constructed for the CAN 2008 tournament.

Table 2: Parameters used for accessing the four pre-Act 715 sports stadiums (Adopted from Accessible Stadia, 2003)

Thematic Areas and Parameters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Outside The Stadium																								
Transport and Access to the Stadium																								
Car Parking																								
Access Routes																								
Providing Information																								
ENTERING THE STADIUM																								
Ticket Outlets																								
Access into the Stadium																								
Designated Entrances																								
Entrance Doors and Lobbies																								
CIRCULATION AREAS																								
Vertical Circulation – Passenger Lifts																								
Vertical Circulation – Stairs and Ramps																								
Horizontal Circulation within the Stadium																								
VIEWING AREAS																								
Number of Spaces																								
Location of Viewing Areas																								
Quality of Viewing Spaces/ Flexible Seating																								
Sightlines																								
Fully Enclosed Viewing Areas																								
Alternative Events																								
Supplying Match Commentaries to Viewing Areas																								
Hearing Augmentation																								
Floodlight / Scoreboard																								
LEAVING THE STADIUM																								
Exit Routes																								
Emergency Evacuation – Sources of Guidance																								
Horizontal Escape																								
Refuges																								
Vertical Escape – Evacuation Lifts, Wheelchair Stairlifts																								
Vertical Escape: Stairs, Ramps, Handrails & Signage																								
Alarm Systems																								
OTHERS																								
Staff and Stewards																								
Restaurants and Bar Areas/Refreshment Outlets																								
Directors' Boxes, Executive Boxes and Hospitality Suites																								
Press and Media																								
Toilets for Ambulant Disabled Spectators																								

It can accommodate 20,000 people, was constructed by the Shanghai Construction Group of China, and serves as Real Tamale United's home stadium. Its design is similar to the Essipong Sports Stadium at Sekondi-Takoradi. It is reputed to be the cleanest and most well-maintained stadium in the nation (Doudo, 2015).

Sekondi-Takoradi (Essipong) Sports Stadium (STSS)

Located at Sekondi-Takoradi, the third largest city in Ghana, it (STSS) serves as the home grounds for the Sekondi Hasaacas and Eleven Wise football clubs. Like the TSS, construction works were commenced in 2006 by the Chinese firm, Shanghai

Construction Group for the CAN 2008 tournament with a capacity for 20,000 spectators. Some facilities at the stadium have however deteriorated in recent times and are awaiting renovation.

Post-Act 715 (2006) Sports Stadiums

Cape Coast Sports Stadium (CCSS)

Inaugurated in May 2016, the Cape Coast Sports Stadium (CCSS) is the newest in Ghana. The construction of the stadium started in October 2012, well after the Persons with Disability Act (Act 715), was passed in 2006. With a seating capacity of 15,000, it is the largest facility of its kind in the Central Region.

Designed and built by the Chinese it has a distinctive Chinese approach to aesthetics and use. The stadium combines both the highest-standard athletic infrastructure and football facilities. Fans are seated in single-tiered stands of 12 rows throughout the field and 30 rows on the west/east sides. Due to the 8-lane running track and additional facilities, sightlines for football are compromised. The stadium also features a 300-car parking capacity, two basketball fields, a handball court and tennis court, and an indoor facility that can be used for any indoor games. The stadium complex has a 22-room hostel facility, a canteen, kitchen, fire-fighting room, and storage rooms among others.

Accessibility at the Pre- and Post-Act 715 (2006) Sports Stadiums In Ghana

Accessibility of Parameters

The analysis was done using both descriptive and inferential statistics where the former involved the use of mean scores and standard deviation. The results of the accessibility parameters conducted in the five stadiums are shown in Table 3. For both the Pre and Post-Act 715 stadiums, nine out of the 32 parameters had $M \geq 3.50$ and were therefore considered to be above Fair and therefore very compliant with the provisions of the Standards. Whereas both groups were very compliant with seven parameters (Transport and Access to the Stadium; Access Routes; Access into the Stadium; Horizontal Circulation within the Stadium; Number of Spaces; Alternative Events; Floodlight/Scoreboard; and Refuges), the Pre-Act 715 group were, in addition, very compliant for Access into the Stadium and Vertical Escape – Evacuation Lifts, Wheelchair Stairlifts, while the Post Act Stadium (CCSS) was additionally very compliant for Providing Information and Exit Routes.

The compliance of stadiums with $2.50 < M < 3.50$ was rated Fair or moderately compliant. Ten and twelve parameters respectively from the Pre and Post-Act 715 stadiums fell into this category. Both groups were moderately compliant for six common parameters (Designated Entrances; Entrance Doors and Lobbies; Vertical Circulation-Stairs and Ramps; Horizontal Escape; Restaurants and Bar Areas/Refreshment Outlets; and Press and Media). Additionally, the Pre-Act 715 stadiums were moderately compliant with Location of Viewing Areas; Quality of Viewing Spaces/Flexible Seating; Sightlines; and Exit Routes. On the other hand, the Post-Act 715 stadium additionally had Car Parking; Access into the Stadium; Horizontal Escape; Vertical Escape-Evacuation Lifts, Wheelchair Stairlifts; Vertical Escape-Stairs, Ramps, Handrails, and Signage and Directors' Boxes, Executive Boxes, and Hospitality Suites as the six additional moderately compliant parameters.

Any parameter that had $M \leq 2.5$ was considered non-compliant with the requirements of the Standards. As many as 56.25% (18 out of 32) of the analyzed parameters fell under this category for the Pre and Post-Act 715 stadiums. Whereas seven out of the eighteen parameters (Car Parking; Providing Information; Vertical Circulation-Passenger Lifts; Vertical Escape-Stairs, Ramps, Handrails, and Signage; Staff and Stewards; Director's Boxes, Executive Boxes, and Hospitality Suites; and Toilets for Ambulant Disabled Spectators) were non-compliant for the Pre-

Act 715 stadiums, six of them (Ticket Outlets; Fully Enclosed Viewing Areas; Supplying Match Commentaries to Viewing Areas; Hearing Augmentation; Emergency Evacuation-Sources of Guidance; and Alarm Systems) were common to both the Pre and Post-Act 715 stadiums. This means that although access to the Pre-Act 715 stadiums had been hampered in areas covered by the six parameters, attempts were not made to cure the mischief in the design and construction of the Post-Act 715 stadium thereby giving credence to the fact that the passage of the Act and other legislation have not had the desired impact.

Legislation is however quite specific and clear about the requirements of the six parameters. For instance, for hearing-impaired spectators, BS 8300:2009 and the Green Guide recognize the importance of good quality lighting and non-reflective glass to make a vendor in a ticket outlet more visible for lip reading. Additionally, the Green Guide recommends electronic systems such as audible public address systems, visual information on electronic scoreboards, audio induction loops in areas of sitting areas and ticket outlets, good lighting at turnstiles and counters, etc. These facilities will enable PWDs to know what is happening in their immediate surroundings and hear public announcements. SGSA; 2004a on the other hand requires that a match commentary be provided by professional commentators for disabled spectators especially those with visual impairments and complemented with provision for a headphone socket connection to sitting areas/spaces. It further recommends the provision of designated areas in different parts of the stadium for PWDs, each area, wherever possible, should have its entry and exit for the evacuation of disabled spectators from stadia in emergencies. Facilities like refuges, protected escape stairways or external routes to the final exit, evacuation lifts, etc. should also be at the stadiums for emergency evacuations.

Additionally, five other parameters that mostly fell under "viewing areas" and therefore very key to the ability of PWDs especially wheelchair users to properly spectate (Number of Spaces; Location of Viewing Areas; Quality of Viewing Spaces/Flexible Seating; Sightlines; and Staff and Stewards) were non-compliant for the Post-Act 715 stadium (CCSS). This means a total of eleven parameters were non-compliant with CCSS and this reinforces the assertion of Asante and Sasu (2015) who argued that the mere provision of accessibility legislation without enforcement will not bring the needed transformation in the built environment.

For stadiums with a capacity of 10,000-20,000 spectators, the Accessible Stadia Guide (SGSA, 2004a) requires 100 plus 5 per 1,000 above 10,000 wheelchair spaces to be provided. This will give 125 spaces for the 15,000 capacity at CCSS. Each designated wheelchair space is supposed to measure 1400 mm by 1400 mm to enable a companion to sit alongside the space in a fixed or removable seat. This will require a total space of 245 m² which is far more than the space provided in CCSS for all groups of PWDs. The location of viewing areas around the stadium for PWDs especially wheelchair users cannot also be overemphasized since they have implications for sightlines and affect the quality of spectating. The Guide therefore recommends

Table 3: Likert scores of thematic areas and parameters

	PRE-ACT STADIUMS						Post Act (CCSS)
Thematic Areas And Parameters	ASS	KSS	TSS	STSS	Mean	SD	Mean
OUTSIDE THE STADIUM	3.25	3	3.5	3.25	3.25	0.957	3.75
Transport and Access to the Stadium	5	5	4	4	4.5	0.577	4
Car Parking	2	2	3	3	2.5	0.577	3
Access Routes	3	3	4	4	3.5	0.577	4
Providing Information	3	2	3	2	2.5	0.577	4
ENTERING THE STADIUM	2.75	2.5	3	3	2.83	0.625	2.75
Ticket Outlets	2	2	2	2	2	0	2
Access to the Stadium	3	3	4	4	3.5	0.577	3
Designated Entrances	3	3	3	3	3	0	3
Entrance Doors and Lobbies	3	2	3	3	2.8	0.5	3
CIRCULATION AREAS	3	3	3.33	3.33	3.17	0.764	3.33
Vertical Circulation – Passenger Lifts	2	2	3	3	2.5	0.577	3
Vertical Circulation – Stairs and Ramps	3	3	3	3	3	0	3
Horizontal Circulation within the Stadium	4	4	4	4	4	0	4
VIEWING AREAS	3	3	2.89	2.89	2.94	0.808	2.44
Number of Spaces	4	4	3	3	3.5	0.577	2
Location of Viewing Areas	3	3	3	3	3	0	2
Quality of Viewing Spaces/ Flexible Seating	3	3	3	3	3	0	2
Sightlines	3	3	3	3	3	0	2
Fully Enclosed Viewing Areas	2	2	2	2	2	0	2
Alternative Events	4	4	4	4	4	0	4
Supplying Match Commentaries to Viewing Areas	2	2	2	2	2	0	2
Hearing Augmentation	2	2	2	2	2	0	2
Floodlight / Scoreboard	4	4	4	4	4	0	4
LEAVING THE STADIUM	2.57	2.57	2.86	2.86	2.71	0.99	3
Exit Routes	3	3	3	3	3	0	4
Emergency Evacuation – Sources of Guidance	2	2	2	2	2	0	2
Horizontal Escape	3	3	3	3	3	0	3
Refuges	4	4	4	4	4	0	4
Vertical Escape – Evacuation Lifts, Wheelchair Stairlifts	3	3	4	4	3.5	0.577	3
Vertical Escape – Stairs, Ramps, Handrails and Signage	2	2	3	3	2.5	0.577	3
Alarm Systems	1	1	1	1	1	0	2
OTHERS	2.2	2.4	2.4	2.4	2.35	0.898	2.8
Staff and Stewards	1	1	1	1	1	0	1
Restaurants and Bar Areas/Refreshment Outlets	3	4	2	2	2.8	0.957	3
Directors' Boxes, Executive Boxes and Hospitality Suites	2	2	3	3	2.5	0.577	3
Press and Media	3	3	3	3	3	0	3
Toilets for Ambulant Disabled Spectators	2	2	3	3	2.5	0.577	4
Total Score (Out of a Total of 160)	89	88	94	93	91		94
% Score (Out of a Total of 160)	55.60%	55.00%	58.80%	58.10%	56.90%		58.80%

that all spectators should have a clear view of events at the stadium, without obstruction from other spectators or physical structures and that the accommodation for the PWDs should include enclosed heated viewing areas as they may be susceptible to cold weather. Both BS 8300:2009 and SGSA; 2004a note that these disabled spectators should be able to see even when spectators in front are standing up. Additionally, the DDA and SGSA; 2004a agree that well-trained staff and stewards, who are sensitive to the needs of disabled people and have knowledge about and familiarity with all the stadium facilities, their location, and access provisions must be present on event days at the stadiums. For instance, if common egress routes are shared by both abled and disabled spectators, the stadium management can

train these staff and stewards to prevent safety conflicts in emergency escape situations. Full-time and well-trained staff and stewards were virtually non-existent at both all the Pre and Post-Act stadiums.

When the raw scores for the 32 parameters are considered with the maximum score of 5 on the Likert scale, CCSS and TSS had the highest scores of 94 each out of a maximum of 160 (Table 1). They were followed by TSS (93), ASS (89) and KSS (88). From the above, although CCSS (Post-Act Stadium) had improved accessibility compared with the Pre-Act stadiums, the gain was marginal, and therefore an indictment on the passage of Act 715 in 2006.

Accessibility of the Thematic Areas

The 32 accessibility parameters were grouped into six major thematic areas in the five stadiums (Table 4). Although the Post-Act 715 Stadium (CCSS) performed better than the Pre-Act 715 stadiums in three thematic areas (Outside the Stadium; Circulation Areas; Leaving the Stadium and Others), one or more of the Pre-Act 715 stadiums performed better than the Post-Act stadium in the remaining two thematic areas (Entering the Stadium and Viewing Areas). There was a tie between two of the Pre-Act stadiums and the Post-Act stadium in the sixth thematic area (Circulation Areas).

Table 4: Ranking of stadiums by thematic areas

	Mean	SD	Rank
Outside the stadium			
CCSS	3.80	0.500	1 ST
TSS	3.50	0.577	2 ND
STSS	3.25	0.957	3 RD
ASS	3.25	1.258	4 TH
KSS	3.00	1.414	5 TH
Entering the stadium			
TSS	3.00	0.816	1 ST
STSS	3.00	0.816	1 ST
ASS	2.75	0.500	2 ND
CCSS	2.75	0.500	2 ND
KSS	2.50	0.577	3 RD
Circulation areas			
CCSS	3.33	0.577	1 ST
TSS	3.33	0.577	1 ST
STSS	3.33	0.577	1 ST
ASS	3.00	1.000	2 ND
KSS	3.00	1.000	2 ND
Viewing areas			
ASS	3.00	0.866	1 ST
KSS	3.00	0.866	1 ST
TSS	2.89	0.782	2 ND
STSS	2.89	0.782	2 ND
CCSS	2.44	0.882	3 RD
Leaving the stadium			
CCSS	3.00	0.816	1 ST
TSS	2.86	1.070	2 ND
STSS	2.86	1.070	2 ND
ASS	2.57	0.980	3 RD
KSS	2.57	0.980	3 RD
Others			
CCSS	2.80	1.095	1 ST
TSS	2.40	0.957	2 ND
STSS	2.40	0.957	2 ND
KSS	2.40	1.291	3 RD
ASS	2.20	0.957	4 TH

Effect of Act 715 (2006) on Accessibility of Sports Stadiums in Ghana

Logistics regression was adopted to ascertain the statistical significance of the improvement in the accessibility of the Post-Act 715 stadiums. The results indicated that the improvement since the enactment of the Disability Act was not statistically significant (Table 5). In other words, the Persons with Disabilities Act, Act 715 has not had the expected positive impact

on the design and construction of the CCSS that was built after it was passed.

Table 5: Logistic regression of accessibility improvement in the stadiums

		Variables in the Equation					
		B	S.E.	Wald	df	Sig.	Exp(B)
Step	Accessibility of stadia	0.362	0.307	1.385	1	0.239	1.436
	Constant	-1.075	0.949	1.283	1	0.257	0.341

Various researchers (Asante and Sasu, 2015, Ansah and Owusu, 2012 Tudzi et al. 2017) have argued that the enactment of such legislation in Ghana did not improve the accessibility of the built environment in Ghana because many post-2006 buildings remain inaccessible to PWDs. This is partly because the legislation did not provide sanctions for non-compliance by architects (designers), builders, building owners, managers, consultants, advocates, and professionals in the building industry who fail to provide facilities and infrastructure that guarantee accessibility and provide a barrier-free environment for the independence, convenience, and safety of all people with disabilities.

CONCLUSION

The passage of the Accessibility Act in 2006 was a significant step towards creating a more inclusive society for people with disabilities. The aim was to make all facilities, including stadiums, more accessible to individuals with disabilities. However, despite the passage of this Act, it appears the anticipated transformation in the accessibility of the built environment is far from realization. This is a concerning finding, as the lack of accessibility in stadiums can create significant barriers for people with disabilities who want to attend sporting events or participate in sports activities. To guarantee that persons with disabilities have the same opportunity as everyone else to enjoy athletic events and activities, this issue must be addressed. The lack of advancement in making modern stadiums more accessible is likely due to a variety of causes. It is possible that the accessibility act's provisions are not being strictly followed, or that the statute does not offer stadiums enough assistance or funding to build accessible amenities. Additionally, it is also likely that some stadium managers are just not giving accessibility the attention it deserves due to their ignorance about the needs of PWDs.

Whatever the causes of the lack of development, it is obvious that more work has to be done to guarantee that more modern stadiums are completely accessible to persons with disabilities. This could need more funding, more enforcement of current legislation, and a change in perceptions of accessibility and disability. The result should be a society that appreciates and encourages the participation of those with disabilities in all facets of life, including sports and leisure.

SOURCE OF FUNDING

Nil

CONFLICTS OF INTEREST

None

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