

Access to Public Toilets Facilities Amongst Physically Challenged People

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Abstract— The human right to water and sanitation constitutes the right of every individual, including physically challenged persons, devoid of any form of discrimination. Access and regular use of sanitation facilities by physically challenged people is pivotal in reducing their risk of contracting diseases associated with poor sanitation. Therefore, this study aims to probe access to public toilets by physically challenged people. The study participants were recruited via a snowball sampling technique. Standard questionnaires with close and open-ended questions, unstructured interviews, observational were employed to elicit data. Descriptive statistics were computed and presented in the tables and figures. The results obtained revealed a total of 42 functional public toilets out of 44 facilities in Wa town. The study further revealed that, although the 10-year moratorium for all public buildings to be made accessible and available to persons living with disabilities has elapsed, only 1 facility had a ramp at the main entrance and a 38mm diameter square steel grab bars (support rails) fixed to the floor and three sides of the walls in two cubicles. It was, therefore, recommended that Architects, Civil Engineers, and other construction professionals as well as Districts, Municipal and Metropolitan Chief Executive be surcharged for superintending the design and construction of future facilities that are not in conformity with the tenets of the Ghana Disability Act, 2006 (Act, 715). The study further recommended modifying the environment of existing facilities to accommodate the needs of people with impairments without necessarily altering the physical space. Also, Disability Rights Movements and Water, Sanitation, and Health promoters must increase the momentum on the advocacy for the design and construction of accessible, inclusive facilities.

Keywords— *Disability; Discrimination; Equal rights; Mobility aid; Barriers*

I. INTRODUCTION

The human right to water and sanitation constitutes the right of every individual, including physically challenged persons (PCPs), devoid of any form of discrimination [1]. The rights of persons with disabilities are guaranteed under the United Nations Convention on the Rights of Persons with Disabilities (CRPD). Article 9 of the convention requires all duty-bearers to identify and eliminate obstacles and barriers to accessibility to ensure that persons with disabilities access facilities and services open or provided to the public [2]. Although access to complements accessibility, the two are

distinct concepts. Whereas accessibility enables people to come to an environment (location of a building or facility), access provides the appropriate aids to help use facility or services to achieve better results [3]. However, both concepts aim to enable PCPs to access sanitation services with dignity and independence without any hindrance or discrimination.

In Ghana, the Persons with Disability Act, 2006 (Act 715) provides that PCPs must be given accessibility in the physical environment and the right to access public facilities and services such as public toilets on an equal basis with persons without mobility challenges [4]. To this end, all duty-bearers are obliged to make appropriate considerations and provisions to accommodate the needs of PWDs in all such facilities to conform with universal design and construction. According to Bhanushali [5], the lack of accessible sanitation facilities by PCPs may lead to embarrassing situations as it deprives them of their most fundamental and private needs. It may also result in unemployment, injustice, discrimination, isolation, and exclusion from public engagements. Conversely, access, and regular use of sanitation facilities by PCPs are pivotal in reducing their risk of contracting diseases associated with poor sanitation. Besides, it promotes their well-being and prevents other diseases associated with their conditions [6].

Consequently, Talib et al. [7], argue that sidelining and discriminating against PCPs may diminish their self-esteem and confidence, and denial of basic human rights, however, barrier-free or disability-friendly facilities encourage and support PCPs to prove their capabilities in the social and economic mainstream. Furthermore, [5], asserts that the barrier-free design's objective is to provide an environment that supports the independent functioning and participation of PCPs in everyday activity. This assertion is supported by Rahim et al. [8], and Imrie [9], with their affirmation that barrier-free environment and facilities are the mechanism for PCPs to access and enjoy public buildings or facilities.

A recent study by Osumanu et al. [10], revealed that 49.8% of households in the urban setting of the Wa Municipality of the Upper West Region of Ghana rely on public toilets. Meanwhile, the Ghana Statistical Service [11], in the 2010 Population and Housing Census, found out that Wa town is home to 289 persons with various physical disabilities that limit their mobility. However, there is a

dearth of information on universal access to sanitation services by PCPs in Wa. Therefore, this study aims to probe the access to public toilets by PCPs in Wa, to ascertain whether the existing designs and conditions enhance their independence and free mobility to develop measures to ensure equal opportunities for PCPs.

II. METHODS AND MATERIALS

A. Study Setting

Wa is a town situated within the Wa Municipality in the Southern part of the Upper West Region of the North-Western part of Ghana. It doubles as the administrative capital of the Wa Municipality and the Upper West Region. It lays on latitudes 10°03'38.48"N and longitudes 2°30'6.91"W. The Municipality is reported as having an urban population growth rate of 4%, with Wa town accounting for an urbanized population of 71,051 representing 66.3% of the entire population of the Municipality [12]. Wa Municipality shares administrative boundaries with the Nadowli-Kaleo District to the North, Wa East District to the East and South boundaries, and the Wa West District to the West and South.

B. Methods

The study used a descriptive cross-sectional study design with both quantitative and qualitative methods. The Snowball sampling technique was employed in selecting 40 PCPs as participants. Snowball sampling refers to a convenience sampling method applied when a researcher finds it difficult to access subjects with the target characteristics [13]. The initial participants of the study recruit future subjects among their acquaintances that should participate in the study. Standard questionnaires with close and open-ended questions were administered to elicit information from the participants. Besides, verbal, unstructured interviews were also conducted, and observational visits to the field were undertaken to ascertain responses given by the participants. Descriptive statistics were computed and presented in the table and figures.

C. Ethical Consideration

Acceptance and clearance were sought from the leadership of the Association of Persons Living with Disabilities (Wa). Besides, informed oral consent was obtained from parents of those participants who were less than 18 years, after explaining the purpose of the study. All the participants were assured of their anonymity and confidentiality of the information being sought from them. However, participants were informed that they could withdraw from the study at any time they so wish.

III. RESULTS AND DISCUSSION

A. Demographic characteristics of respondents

A total of forty (40) PCPs participated in the study; 62.5% were males, and 37.5% represented females (Figure 1). Among the respondents was 10% of PCPs aged below 19 years, 15% of them were 70 years or above with the majority, and 75% were between 20 and 69 years (Table 1). As presented in figure 1, the majority, 37.5% of the respondents have attained primary education, 22.5% have no form of education, 5% have pursued higher education (Figure 1).

According to Afoakwa and Dauda [14], the low educational attainment amongst people with impairment is attributable to stereotypes and stigmatization, lack of funding or support, inadequate disability-friendly educational facilities, and derogatory remarks. Furthermore, out of the 40 respondents, 15% were unemployed, 10% were employed in the formal sector, and a majority (n = 75) of the respondents worked in the informal sector. In their study, Afoakwa and Dauda [14], noted that the employment status of people with impairment was determined by their level of education and misjudgment of disability being inability.

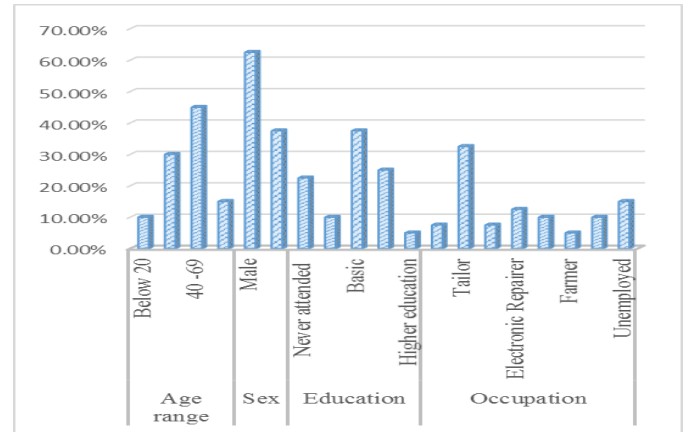


Figure 1: Demographic characteristics of the respondents

B. Mobility aids used by PCPs

PCPs are people with mobility impairments. According to Arefin et al. [15], these groups of people suffer from movement difficulties and risk falling. They further submitted that mobility aid alleviates mobility limitations and facilitates movement independence. Besides, mobility aid helps to improve and maintain balance while performing activities of daily chores [16]. The respondents were asked about the aids they used in assisting their mobility. From the results obtained, it was realized that the respondents used various mobility aids. The analysis, as presented in (Figure 2), indicates that 20% of the respondents used wheelchairs, and 27.5% used crutches. Among the respondents, 12.5% did not use mobility aids, while another 12.5% used special boots. Those who used prosthetics represented 5% of the respondents. The remaining 9% depended on a walker or a combination of crutches and wheelchair. The study revealed that the choice of mobility aids was determined by cost, availability, the usefulness of device, and self-reliance. This is consistent with a study by Ezeukwu et al. [17], that outlined that high cost, privacy implications, usability factors, expected benefits of the device, need for device help by family or spouse, social influence as determinant factors for the choice of assistive aids.

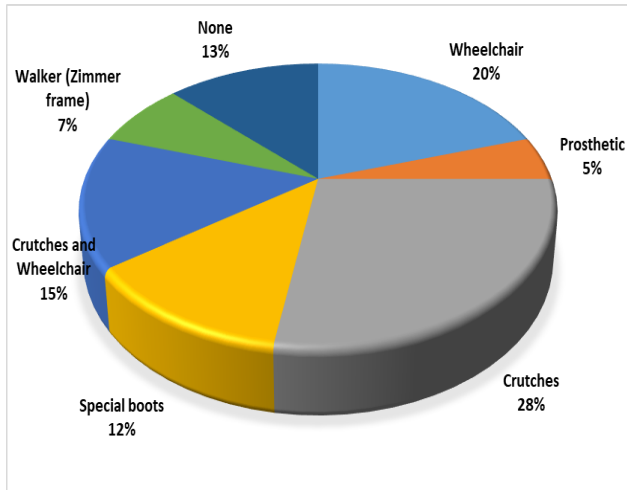


Figure 2: Mobility aids by PCPs

C. Facility access and utilization

The location and design of accessible toilet facilities are essential as they provide PWPDS with the opportunity to access them equally, just like non-disabled people. Besides, Canham [18], noted that inclusive public toilets enhance urban sustainability because they make cities accessible to a wide range of users, including the disabled. They further argued that public toilets are a clear example of how the built environment's design can either include or exclude individuals and groups from city centers. To this end, respondents were required to evaluate the inclusiveness and frequency of utilization of public toilets in the study area. In assessing the frequency of public toilets utilization, 27.5% indicated that they had never used the facilities. However, 52.5% rarely used public toilets, whereas 20% often used the facilities (Table 1). From the study, 70% of the respondents reported that the public toilets in the study area were not user friendly because of an uneven entrance, relatively high threshold, or steps at the toilet facilities.

TABLE 1: Frequency of using the public toilet

Variable	Frequency	Percentage (%)
Never	11	27.5
Rarely	21	52.5
Often	4	20
Total	40	100

Wheelchair users who often patronized the facilities revealed that they always leave their wheelchairs outside and crawl into the facilities. However, a recent study by Ahuma-Smith et al. [19], in the study area revealed that the sanitary condition of most of the public toilet facilities was in a sorry state. When asked about how they were able to crawl through the dirty floor at most facilities, they stated that they use reusable plastics gloves to aid in crawling; however, their lower limbs are often left unprotected. For easy access to sanitary facilities, Water Aid India [20], suggests a low-gradient (1:12m or more) concrete ramp with raised sides for safety or a moveable wooden ramp to access facilities with steps that may be suitable for people using a wheelchair. They suggested a low concrete step (same height and depth) with crosshatching to reduce the risk of slipping for those

who can take the steps. When the respondents were asked about alternative places or means of satisfying their toilet needs, 90% (36) reported a preference for defecating. They further indicated that they either defecated into black polythene bags or potties for later disposal in nearby bushes or communal waste dump site. However, indiscriminate disposal of human waste endangers human lives. Saleem et al. [21] noted that inappropriate human waste disposal exposes humans to pathogens, which tend to cause significant health risks such as diarrhea, typhoid and cholera, and viral infections.

The respondents also indicated that narrow doorways and cubicles made it difficult for them to maneuver with the wheelchairs to access their needs. According to Áfio et al. [3], most toilets are considered inaccessible due to restricted space, which impedes wheelchair movement, especially regarding rotational movements that prevent the independent and private use of the facility. They recommended that toilet facilities should have enough space to allow wheelchair users movement by providing room for forward, 90°, 180°, and 360° transfer and approach maneuvers. WaterAid India [20], also suggested that doorways should have a clear width of 900mm for persons using mobility aids to get through doors.

According to WaterAid India [20], grab bars which may be of galvanized iron or steel pipes of 40 to 45mm diameter are supportive bars which are usually fixed firmly to the adjacent walls and floors, so that persons with disability can transfer their body weight for movement. Ochien'g et al. [22], also argued that grab bars aid users' stability to maintain their balance; according to them, grab bars enhance the usability of the toilets. However, respondents who rarely or frequently (Table 1) used public toilets reported never sighting grab bars in any of the facilities they have ever patronized in the study, which hindered the use of public toilet facilities. When asked if the alternative to the grab bars, a section of the respondent indicated they used their crutches, walkers, and others to lean on the uncleaned walls for support.

A considerable number of respondents reported that due to the dearth of accessible public toilets, they are either compelled to strictly go to areas where they are sure of accessing a friendly facility from a nearby home or they are sometimes prevented from being away from home for long periods.

D. Observations and auditing of the public toilets

In a recent study, Ahuma-Smith et al. [19], revealed a total of 44 public toilet facilities in Wa town. However, only 42 were functional because one of the two facilities had its roof structure ripped off while the other was under renovation. They further indicated that the facilities were mostly (86.4%) in low-income neighborhoods with a few (13.6%) within the main commercial center. The Wa Municipal Assembly owned 88.6% of the facilities, while the remaining 11.4% were privately owned and operated by private investors under the Municipal Assembly (Figure 3). The capacities of the public toilet facilities in the study area ranged between 6-cubicles and 28-cubicles per facility. A toilet audit based on International Standard Organization (ISO), ISO 21542 [23], was conducted on five (5) parameters, namely entrance, stairs, ramp, horizontal circulation (corridor) grab bar, and

cubicle.

The audit revealed that 97.6% of the functional public toilet facilities had stairs, ranging between a step and 3-steps stairs at the main entrance. Only one facility (Figure 3) had a ramp at the main entrance. However, the ramp's gradient was calculated to be 1:3m, which is way steeper than the recommended 1:12m. Consequently, wheelchair and some crutches users could not access it independently. The ramp width measured 1230mm. It is worthy to note that none of the facilities in the study area had handrails at the entrance. Out of the 42 functional facilities, 92.9% had clear entrance width of a minimum of 900mm. However, only 3 of these facilities could be accessed independently by a wheelchair user should a ramp be provided. This is due to insufficient space to do a 90° turn from the entrance to access the corridor leading to the cubicles. The findings of this audit corroborate why the wheelchair users had to leave their wheelchairs outside and crawl into the facilities. Should ramps be provided for wheelchair users to enter the toilet facilities, only 9.5% of the facilities can permit maneuvering on the corridors. For the remaining 90.5%, the user of the facility can only either go forward or backward. The preceding indicates that PCPs are gravely marginalized or excluded from accessing public toilets in Wa.

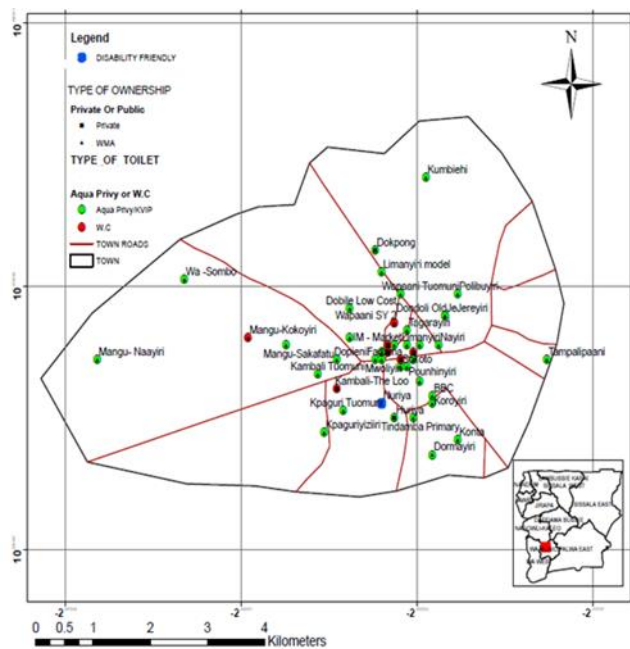


Figure 3: Public toilet locations within Wa township

The audit further revealed that out of the 86.5% of the functional public toilets were designed with squatting holes. However, PCPs have difficulties in squatting, and therefore squatting (low-level) type of toilet without seat or support may not be suitable for persons with physical disabilities. Only one facility had 38mm diameter square steel grab bars (support rails) fixed to the floor and three sides of the walls in two cubicles (Figure 4), each for each sex. It is worthy to note that this facility, which is an 8-seater ventilated improved pit latrine, is owned, and managed by a primary school under the Municipal Assembly's supervision. The facility is, however, open to the public as a pay-per-use toilet.

The Persons with Disability Act, 2006 (Act 715), which is

meant to protect the rights of people with impairment and facilitate their inclusion in mainstream social, political, and economic activities, is not being implemented as anticipated. From the outcome of the audit, it can be argued that the lack of enforcement of some aspects of the legal and regulatory structures meant to ensure inclusiveness is the source of the continuous discrimination and social exclusion of people with impairment in Ghana. Although some public toilet facilities predate the Act 715, a considerable number of the facilities in the study area were also designed and constructed post Act 715.



Figure 4: Steel grab bars (support rails) fixed to the floor and walls

Although the 10-year moratorium for all public buildings to be made accessible and available to persons living with disabilities has well elapsed, no frantic effort has been made either to modify the environment without necessarily changing the physical space or design and construct inclusive facilities. However, the Act mandates equal rights and access to public buildings. Consequently, Bhanushali [5], posits that the neglect of people with impairment can negatively impact their health, dignity, and economic and social exclusion.

IV. CONCLUSION

The study reported that public toilet access and utilization are deficient among PCPs. The study revealed that there had been no significant building modification measures or new designs and constructions to accommodate the sanitary needs of PCPs adequately. The absence of ramps and handrails, unavailability of grab bars within cubicles, inability to safely and independently maneuver, squatting holes without elevated seats, were identified as impediments to accessing public toilet facilities. By way of recommendation, this study suggests that Architects, Civil Engineers, and other construction professionals as well as Districts, Municipal and Metropolitan Chief Executive be surcharged for superintending the design and construction of future facilities that are not in conformity with the tenets of the Ghana Disability Act, 2006 (Act, 715). Also, the study suggests modifying the environment of existing facilities to accommodate the needs of people with impairments without necessarily altering the physical space. Further, Disability Rights Movements and Water, Sanitation, and Health promoters must increase the momentum on the advocacy for the design and construction of accessible, inclusive facilities.

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