ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 13, Issue, 01, pp.15907-15916, January, 2021

DOI: https://doi.org/10.24941/ijcr.40512.01.2021

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

COMMUNITY BARRIERS TO ACCESS QUALITY HEALTHCARE SERVICES AMONG PHYSICALLY CHALLENGED PERSONS IN GEM SUB COUNTY, SIAYA COUNTY

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ARTICLE INFO

Article History:
Received 10th October, 2020
Received in revised form
14th November, 2020
Accepted 28th December, 2020
Published online 30th January, 2021

Key Words:

Access; Barrier; Community; Gem sub-County; Healthcare; Physical Disability.

ABSTRACT

Despite Kenya's commitment to equal access to healthcare for all by the year 2030, and the increase in the number of services provided, physically challenged persons still meet difficulty accessing health services for reasons attributable to different factors. This descriptive cross-sectional study identified existing community-related factors hindering access to healthcare services by the physically challenged persons in Gem Sub-county, Kenya. Stratified and systematic random sampling was used to select 108 physically disabled persons. Data was collected using semi-structured questionnaire and analyzed using SPSS (v23). Descriptive statistics were used to summarize social-demographic and physical attributes of the participants, qualitative data was subjected to thematic analysis and x^2 test was used to detect the relationship between relevant variables (α= 0.05). Out of 108 respondents, 65(male=33) had difficulty in accessing healthcare services. Community factors like cultural beliefs, taboos and environment inaccessibility to health facilities were found to significantly influence access of healthcare services ($p<0.05$). The study highlights the importance of community leadership enhancing awareness creation to minimize beliefs and taboos hence improving social support to PWPDs from community to ensure the rights of PWPDs to healthcare services are put in place and implemented under legislation and policy. Further research is required to explore ways to remove barriers to access to healthcare.

Citation: ***Owuocha, Dorice Akoth, Onguru, Daniel Ogungu, Otieno, David Odongo, Ojwang', Hellen Atieno et al. 2021*** "Community barriers to access quality healthcare services among physically challenged persons in gem sub county, siaya county", *International Journal of Current Research*, 13, (01), 15907-15916.

INTRODUCTION

Over a billion people 15% have some form of disability (WHO, 2018b). According to WHO,2001 disability is the interaction between individuals with a certain health condition like cerebral palsy, down syndrome and depression and personal and environmental factors (for example negative attitudes, inaccessible transport and public buildings and limited social support). While some PWPD's health conditions result in extensive healthcare needs and poor health, some do not. In addition, all people with disabilities have same general healthcare needs and hence need access to conventional healthcare services. Despite the universal right to access the same range, standard and affordable healthcare, PWPDs continue experiencing challenges in accessing these services (Maart & Jelsma, 2014).

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Health is a basic need and every person has the right to the highest attainable standard of health, which includes the right to healthcare services, including reproductive healthcare (Gibson & Mykitiuk, 2012). United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) emphasizes that state parties should take all appropriate measures to ensure access for persons with disabilities to health services that are gender sensitive, including health related rehabilitation (Legge & Chung, 2016). Equitable access to healthcare is a major principle of national health system globally (Mannino *et al.*, 2018). However, persons with physical disabilities generally experience greater barriers in accessing healthcare than general population and these problems are further exacerbated for those with disabilities in rural areas. PWPDs in rural settings confront a wide range of informal, geographical and financial barriers to healthcare access. These barriers can lead to negative health disparities between PWPDs and the general population (Karampampa *et al.*, 2019).

Disability is considered not just a problem for people with physical impairment, individuals and their families but also an

economic liability for nations (WHO, 2018a, 2018b). Previous studies have generalized barriers in accessing healthcare among all people with disabilities in rural areas. From the previous studies, it is noted that the convolution of the barriers which unfold throughout one's lifetime create complex situations and may prevent one from accessing healthcare services even if the services are available (Levesque *et al.*, 2013). Looking at each barrier independently without appreciating the connection between them may make us think that some of them are rather negligible. The interplay between the many different elements creates situations with significant obstacles. The amalgamation of factors creates barriers to accessing healthcare services among PWPDs that may be too challenging to overcome. This study determined the combination of factors that influence access of healthcare among people with physical disability in Gem Sub County and describe how uniquely these factors influence PWPDS. This study used a cross sectional study design and incorporated individuals of ages between 18 to 70 years which would be useful when considering an intervention. Our results could inform Kenyan health authorities and members of the community on value of improving ease of access to healthcare services among PWPDs.

Material studied: We selected 108(men and women) participants between 18 to 70 years with notable physical disability residing within Gem Sub County and have sought healthcare services within that area. These participants were consented and interviewed to determine the access barriers to healthcare services by PWPDs. The participant had to have been residing in Gem for the past 12 months. Persons with hearing, visual, mental impairment and others were excluded, only focusing on people with physical disabilities (mobility). The study variables included gender, education and occupation related factors, cause of disability, type of assistive device and their preferential treatment when they visit healthcare institutions in their residential or workplace. Answers were given to all the questions. Key informant interviews were conducted to find out the community related factors that influence access to healthcare services among the PWPDs in Gem Sub County. It involved six in-depth interviews with stakeholders and each health facility was represented by healthcare provider namely; Two Kenya Registered Community Health Nurses, one Public health officer, one Registered clinical officer, one Medical Laboratory officer and a Physiotherapist.

Area Description: Gem Sub County is approximately 405.3 km^2 and it is divided into six locations namely; Yala Township, North Gem, South Gem, East Gem, West Gem and Central Gem. The Sub-county has 39 health facilities (Yala Sub County Hospital, 16 Health Centers, 12 Dispensaries, 10 private health facilities and 1 faith-based facility). According to the previous census (KNBS 2012), the number of people with disabilities in Siaya County was about 77,000 (5.3%) . This sub-county was selected because it is in the county where there is higher concentration of people living with disabilities.

METHODS

Sampling procedures: Stratified sampling procedure was applied, where the study area was stratified into the existing 6 administrative wards. In each ward, the study purposively identified the healthcare facility with the highest patient turnover. Community units were used to stratify the community in order to sample CHVs from the community. The selected CHVs were requested to identify known PWPDs who were approached and their consent requested`. To address internal validity, the study participants were selected at random and were given space to choose their responses without influence of a family member or the research assistants. External validity was ensured by conducting a pilot study and the results compared with real study. The study also ensured only a specific population was studied (people with physical disability in Gem Sub County). This makes the outcome of this study able to explain the difficulties people with physical disabilities experience in other rural settings.

Data collection and analysis: Data was collected using photovoice and questionnaires. The questionnaires were developed in English and translated into Dholuo (native language) with subsequent translation in English at a venue of the participant's choice. The data were checked for errors and were entered into excels spread sheet. Data collected was coded and tabulated on frequency tables, summarized using percentages and presented in pie charts, graphs and tables. Data analysis was conducted using Statistical Package for Social Sciences (SPSS v23) and excel. Chi-square analyses was used to detect differences and associations between variables relating to the individual PWPD, descriptive analysis was conducted to present percentages and thematic analysis was performed to determine certain variables such as age, gender, cause of disability, infrastructure and level of access. Qualitative component highlighted an array of community barriers that prevented the PWPDs from accessing healthcare services.

Ethical considerations: Authority to conduct this study was obtained from the Board of Postgraduate Studies, Jaramogi Oginga Odinga University Science and Technology (JOOUST). Ethical clearance was obtained from the Jaramogi Oginga Odinga Teaching and Referral Hospital (JOORTH) Ethics Review Committee. Permission to conduct the study was sought from the National Commission for Science, Technology and Permit from National Commission for Science (NACOSTI) and Ministry of Health, Gem Sub County, as well as the management of the selected health facilities. The local administration was also requested to allow the research to be done within the community. Prior to enrolment, the purpose of the study was explained to each prospective study participant, and a written informed consent was translated and explained to potential respondents in a language well understood by them prior to their enrolment in the study was obtained. The study participants were reassured that the information they are providing was to be kept confidential and that their identities would not be revealed in the association with the information they provide. Due diligence was accorded during the entire data collection process, given the sensitive nature of the study participants, in order to prevent any perception of stigmatization of the participants. Study findings was relayed to the community through feedback meetings at the community level or at the health facilities.

RESULTS

Sociodemographic characteristics of the respondents: The participants' ages were categorized in 6 groups. Majority of the respondents 24(22.2%) were between 35-44 years old while only 18(16.7%) were 65 years old and above. The average age of

respondents was 45years with mean 45.3and standard deviation of 16.1. In terms of sex, equal number of males and females were interviewed, that is, 54(50%) males and 54(50/%) females. Majority of the respondents 52(48.1%) were married compared to 27(25%) who were widowed, 23(21.3%) who were single and 6(5.6%) divorcees. The study also found that majority 59(54.6%) of the respondents had not completed primary education. Only 8(7.4%) of the individuals had completed secondary education as 16(14.8%) of the individuals had no formal education. This shows that majority 96.3% of the people with physical disabilities interviewed had not completed tertiary education. The study noted that 70(64.8%) of the individuals were unemployed, 8(7.4%) were formally employed, 28(25.9%) were self-employed and only 2(1.9%) were students. Most respondents (99.1%) were Christians as shown on table 1**.**

Table 1. Social demographic characteristics of respondent

Variable	Category	PWPD	Remarks
Age (years)		n	%
	18 – 24	15	13.9
	25 – 34	15	13.9
	35 – 44	24	22.2
	45 – 54	17	15.7
	55 – 64	19	17.6
>65		18	16.7
Gender		n	%
	Male	54	50.0
	Female	54	50.0
Marital Status		n	n
	Single	23	21.3
	Married	52	48.1
	Divorced	6	5.6
	Widowed	27	25.0
Education level		n	%
Primary completed		14	13.0
Primary not completed		59	54.6
Secondary completed		8	7.4
Secondary not completed		7	6.5
Tertiary completed		4	3.7
None		16	14.8
Religion		n	%
	Christian	107	99.1
	Muslim	1	0.9

Causes of physical disability among the respondents: In figure.1,74(69%) of the disabilities among the respondents were caused by some form of sickness or disease. Only 12(11%) were born with the physical disability while 7(6%) were as a result of injection. This shows that majority (89%) of the respondents acquired their disabilities after birth.

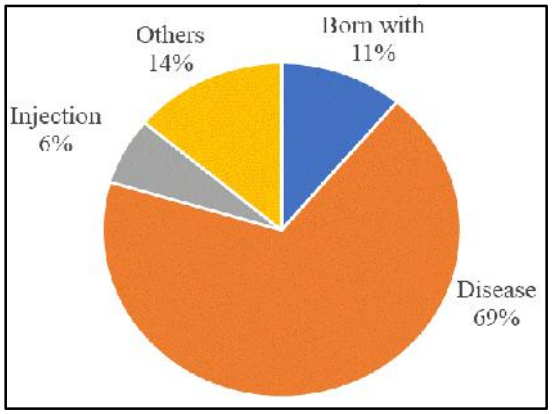


Figure 1. Causes of disability among the respondents

Community Related factors that influence access to healthcare: The study determined how community related factors influence access to healthcare among people with physical disability. Gender, education, occupation and monthly income were captured as key person related factors.

Gender related factors: Table 2 shows that gender was not significantly associated with difficulty in paying medical bills and staff attitude at the reception. A total of 54(100%) female respondents had difficulties paying medical bills as well as 51(94.4%) of the male respondents. In terms of staff attitude, 48(88.9%) of the females and 41(75.9%) males reported poor staff attitude at the reception during their visit to various clinics. In addition, gender was not found to have greatly influenced respondent's difficulty in obtaining doctor's appointment, satisfaction with quality of services and perception of whether disabled people give birth to disabled children and level ($p<0.05$) of satisfaction with quality of services offered.

Distribution of the respondent by education level: Figure 2 shows that the majority of the respondents had not completed primary education; 10 (9.3%) from East Gem and West Gem, 9 (8.4%) from Yala Township and 8(7.4%) from North Gem. Only 2(1.9%) respondents from Yala Township had completed tertiary education. South Gem had the highest number, 16(14.8%) of the respondents who had completed secondary education.

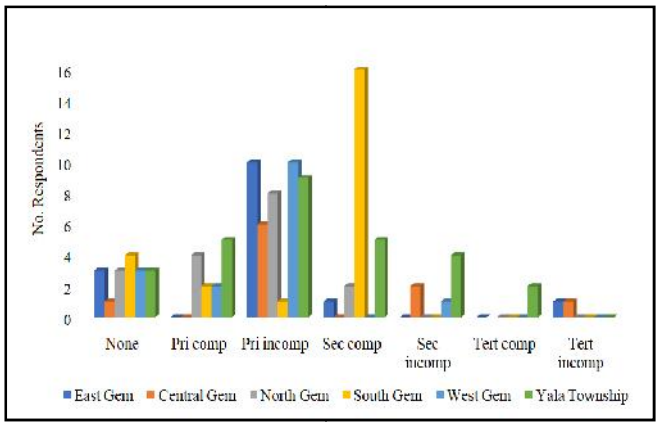


Figure 2. Distribution of the respondent by education level

Education related factors: Table 3 shows that education significantly influenced difficulty in paying medical bills and access to medical devices ($p<0.05$). However, it was not found to greatly influence difficulty in obtaining doctor's appointment, staff attitude at the reception, satisfaction with the quality of service and access of the health facility in the past. All individuals who had not completed primary education, those who had completed, and those who had not completed secondary education indicated that they had difficulty in paying medical bills.

Distribution of the respondent by monthly income: In terms of monthly income, majority of the participants 102(94.4%) had average monthly income of less than KShs 5000 while 5(4.6%) had average monthly income of between KShs 5100 to KShs 10000 and 1(0.9%) individual monthly income greater than KShs. 15,000. Those with an income of less than KShs. 5100 had difficulty in paying medical levies and accessing medicine/ devices compared to those earning higher income (Figure 3).

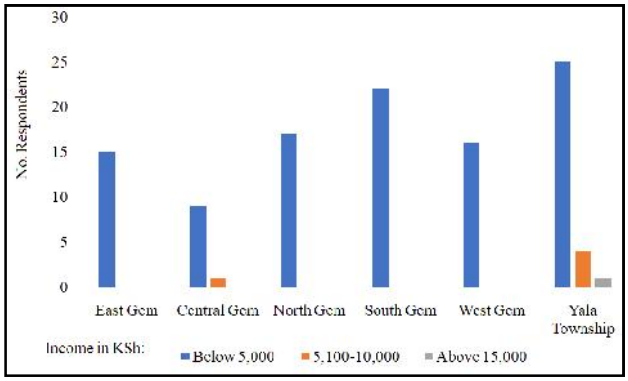


Figure 3. Distribution of the respondent by monthly income

Occupation related factors affecting people with physical disabilities: Table 4 shows that occupation significantly influenced access to medicineand paying of medical bills ($p<0.05$). Of those who were employed, 5(62.5%) had difficulties in accessing medicine and medical devices and 7(87.5%) had difficulties in paying medical bills. The study also found that those who were self-employed had difficulties in accessing medicine and assistive devices 24(85.7%) and also difficulty in paying medical bills 26 (92.9%). All students 2(100%) experienced difficulty in paying medical bills and accessing medicine. Occupation significantly influenced difficulty in paying of medical bills ($p<0.05$). All reports on the observations made were done in the six health facilities within the community looking into; Exterior car parking with presence of preserved parking for PWPDs only, signage for the parking and assistance and security around the parking area, entrance and exit with signage and slippery floor, including floor notifications and adequate space, Wheelchair ramps, wide aisle, adjustable equipment and spacious lavatories for PWPDs only. Yala Sub County Hospital recorded the highest 32%, Wagai Health Centre 20% while Nyawara, Malanga, Ramula and Akala all recorded the lowest (14%) in terms of availability of PWPD-friendly infrastructure.

Preferred treatment expectations by PWPDs: Table 6 shows that majority of the respondents 20 (18.5%) prefer free food or medical devices and employment of more specialist's physiotherapist, orthopedic specialists and increase mobile clinics for people with disabilities as preferential treatments they would like so as to access quality healthcare. Some of the respondents 18(16.6%) also preferred they be provided with free assistive devices and be offered free repair for their devices whenever they get dilapidated. In addition, they also prefer that hospitals be equipped with adjustable beds and examination tables 11(10.25%) and accommodative transport and infrastructure 8(7.4%).

Community related factors that influence access to healthcare: The study sought to find out how community perceptions influence access of healthcare among people with Physical disability. Cultural beliefs, stigma, taboos and lack of social support from the family members were some of the community related barriers that were found to be a barrier to access of healthcare. Lack of social support came out as a strong factor that affects PWPDs Community misconception and stigma remain associated with PWPDs, homes of PWPDs and this intern leads to attitude and behavior of neglect, isolation, abuse and marginalization of PWPDs by communication and family leading to increased discrimination.

The PWPDs are under looked by their fellow peers in the society that they live. PWPDs and their immediate family members have had to continue to have negative attitude, they are most perpetrators of violence as parents often hide and deny them their rights thinking that they are totally helpless. Community view PWPDs as objects of charity worth of no existence this affects the ambition of PWPDs. Its painful reality that PWPDs get inadequate nutrition that prevents their development both physically and cognitive. This has led to poor health due to lack of food security. Lack of community mobilization and advocacy.

One of the Kenya registered community health nurse said *"Lack of social support from family members as some are neglected by their family members, cost of transport and unfriendly equipment and infrastructure are some of the factors that hinder access of healthcare among people with disabilities" (KRCHN, female 40yrs codeM002)*

Cultural beliefs were also mentioned as a barrier by the PWPDs to access quality healthcare. Community members believe disability is a curse hence disabled people should not be associated with. Since most of PWPDs require assistance to move and or go to various health facilities, lack of such support makes them unable to get quality healthcare from the hospitals as narrated by one medical laboratory officer who said, *"Some community members view disability as a curse so they are isolated, hidden and also community practices like use of herbs to manage physical disability are some of the factors that hinder access of healthcare among people with disabilities"(MLO, male 27yrs code R001).*

A registered Clinical Officer revealed that *"At community level, a lot of beliefs tend to be linked to their deformities hence a lot of challenges like accessing public transport" (RCO, male 32yrs code A01) w*hile a Public Health Officer (PHO, male 50yrs code Y002) concurred with another nurse (KRCHN, 29yrs, code N001), who said *'Negative attitude from the community. Isolation and stigma, community practices and ignorance about the treatment of person with physical disability at healthcare facility'. 'Others experience discrimination, stigma, poverty and poor coordination which makes the physically challenged not to get to the health facilities. Unfriendly infrastructure and high cost of reproductive health services'This has been because of weak institutional frame work as a result of poor coordination between government institution and civil society organization of PWPDs (PHYSIOTHERAPIST, maie 31yrs codeY003)*

Some of the participants (PWPDs) had the following to say on the treatment they get when they visit hospitals. Participant with amputated left leg due to an accident at home around two years now. *I cannot afford to buy orthopedic shoes (which I would really wish to have) because they are expensive, not locally found in the markets and longer processes of getting them. (*Male 29 yrs., code 015Y)

Participant" I'm *with wooden crutches which I'm not used to and when it rains, I easily stumble and fall down due to muddy, stony, water and potholes on the roads from my home to the bus stop. In most cases therefore, I'm indoors to avoid endangering my life." (*Female 24yrs, code 107N)

Expectant female participant *"I am a pregnant mother of two children (also a widow) with no assistive devices and I am*

Table 2. Gender related factors

Variable	Person with physical disability					Remarks
Gender	No	n	%	Yes n	%	p value
Difficulty in obtaining doctor's appointment						
Female	22		40.7	32	59.3	0.844
Male	21		38.9	33	61.1	
Difficulty in paying medical levies						
Female	0		0	54	100	0.079
Male	3		5.6	51	94.4	
Disabled people give birth to disabled children						
Female	54		100	0	0.0	***
Male	54		100	0	0.0	
Staff attitude at the reception						
Female	6		11.1	48	89.9	0.077
Male	13		24.1	41	75.9	
Distance to hospital in 30 minutes to 1 hour						
Female	10		18.5	44	81.5	1
Male	10		18.5	44	81.5	
Satisfied with quality of services						
Female	36		66.7	18	33.3	0.548
Male	33		61.1	21	38.9	

Table 3: Education related factors

Variable	Person with physical disability					Remarks
Education	No	n	%	Yes n	%	p value
Difficulty in obtaining doctor's appointment						
No formal education	3		18.8	13	81.2	0.008
Primary completed	6		42.9	8	57.1	
Primary not completed	28		47.5	31	52.5	
Secondary completed	1		12.5	7	87.5	
Secondary not completed	2		28.6	5	71.4	
Tertiary completed	3		75.0	1	25	
Difficulty paying medical levies						
No formal education	3		18.8	13	81.2	0.095
Primary completed	1		7.1	13	92.9	
Primary not completed	0		0.0	59	100	
Secondary completed	0		0.0	8	100	
Secondary not completed	0		0.0	7	100	
Tertiary completed	1		25.0	3	75.0	
Access medicine/devices difficulty						
No formal education	1		6.3	15	93.7	0.008
Primary completed	6		42.9	8	57.1	
Primary not completed	6		10.2	53	89.8	
Secondary completed	2		25	6	75.0	
Secondary not completed	0		0.0	7	100	
Tertiary completed	2		50.0	2	50.0	
Staff attitude at the reception						
No formal education	0		0.0	16	100	0.19
Primary completed	4		28.6	10	71.4	
Primary not completed	9		15.3	50	84.7	
Secondary completed	2		25.0	6	75.0	
Secondary not completed	4		57.1	3	42.9	
Tertiary completed	0		0.0	4	100	
Satisfied with quality of services						
No formal education	9		56.2	7	43.8	0.071
Primary completed	13		92.1	1	7.1	
Primary not completed	38		64.4	21	35.6	
Secondary completed	4		50	4	50.0	
Secondary not completed	2		28.6	5	71.4	
Tertiary completed	3		75	1	25.0	
Access health facility in the past three months						
No formal education	13		92.9	1	7.1	0.019
Primary completed	9		64.3	5	35.7	
Primary not completed	33		55.9	26	44.1	
Secondary completed	5		62.5	3	37.5	
Secondary not completed	3		42.9	5	57.1	
Tertiary completed	1		25	3	75	

unable to go for antenatal clinic. I do not know how I will go for delivery services due to lack of these devices despite free antenatal clinic services and Linda Mama program (free delivery)."(Expectant female participant 28yrs, code 077W)

"Economically, I am unable to depend on close relatives or well-wishers for their support, of which sometimes I do not get due to persistent begging each and every moment. Due to my condition (immobility) I wished there was a special unit for

Table 4. Occupation related factors affecting people with physical disabilities

Variable	Person with physical disability					Remarks
Occupation	No	n	%	Yes n	%	p value
Access to medicine/devices difficulty						
Employed	3		37.50	5	62.5	0.0336
Self-employed	4		14.3	24	85.7	
Student	0		0.0	2	100	
Others	10		14.3	60	85.7	
Difficulty paying medical levies						
Employed	2		2.0	100	98.0	0.0001
Self employed	0		0.0	5	100	
Student	1		100	0	0.0	
Others	0		0.0	0	0.0	
Access to healthcare in the past three months						
Employed	62		60.8	40	39.2	0.0313
Self employed	2		40.0	3	60.0	
Student	0		0.0	1	100	
Others	2		0.0	0	0.0	
Monthly income (KShs)						0.0001
< 5000	102			94.4	94.4	94.4
5100-10000	5			4.6	4.6	4.6
>15000	1			0.9	0.9	0.9

Table 5. Health facility checklist score

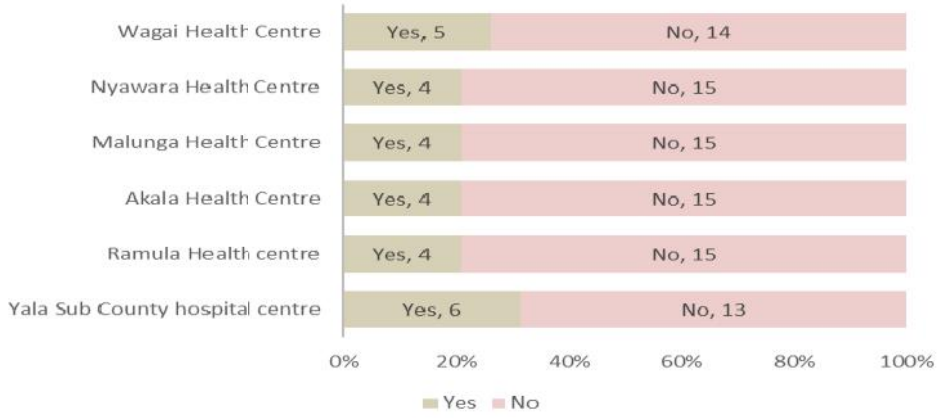


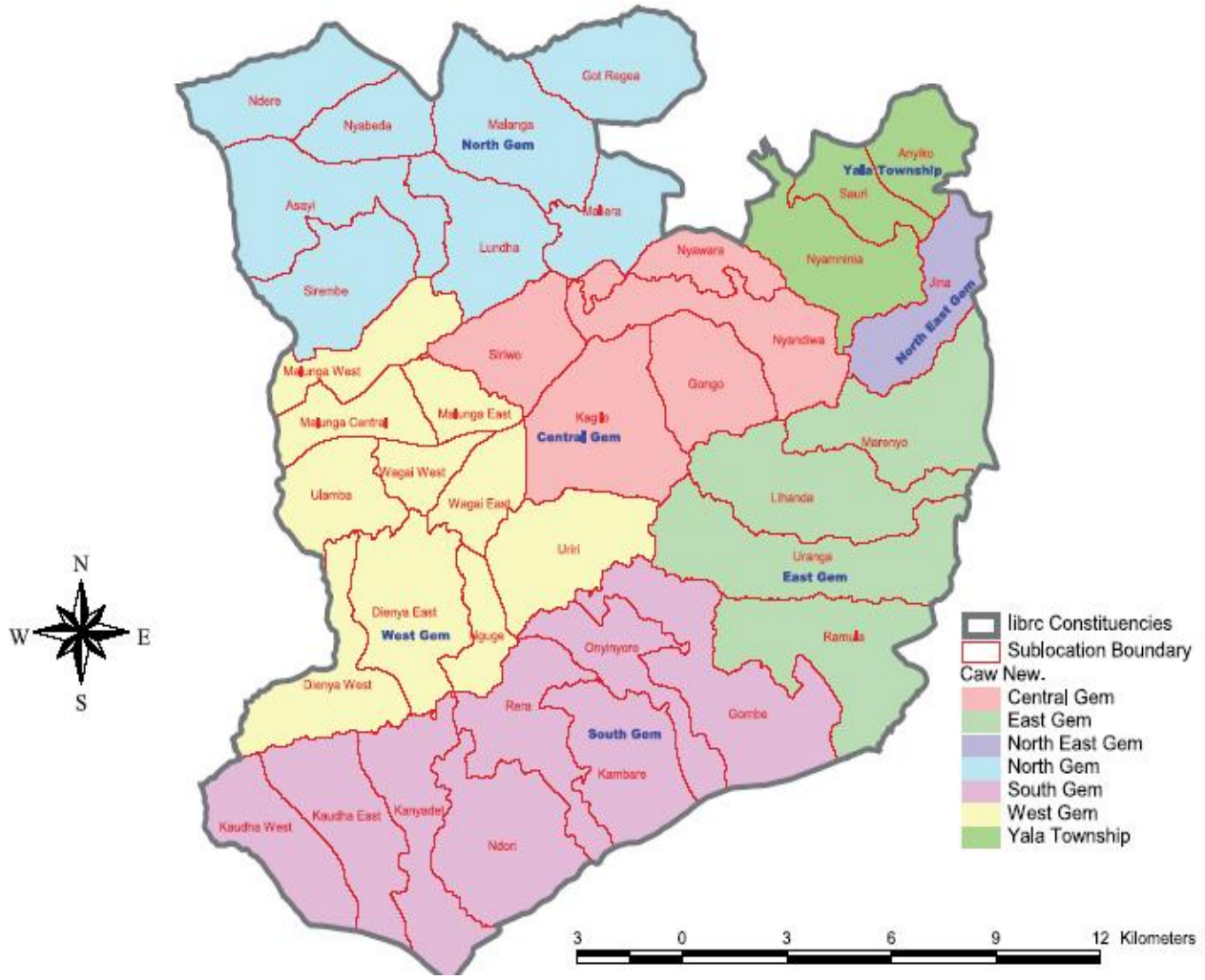
Table 6. Expected preferential treatment

Response	Frequency	%
Improve communication network coverage and roads/pathways for PWPDs	2	1.9
Free registration by NCPD and NHIF in the nearest health facility.	7	6.5
Accommodative transport/ infrastructure	8	7.4
Free or affordable food/ medication/ devices	20	18.5
Provide free devices and repair at no cost	18	16.6
Improve signage post	1	0.9
Creation of good rapport by healthcare providers (nurses, doctors, CHVs)	10	9.3
Employ more specialists (physiotherapists, orthopedic specialists) and increase mobile clinics for PWPDs	20	18.5
Build accommodative toilets and bathroom	6	5.6
Provide adjustable beds and examination tables	11	10.2
Provide special units for PWPDs and geriatric wards	5	4.6
Total	108	100

*PWPDs near my home or a geriatric ward where I would stay for the remaining few years of my life."On certain situations when I'm not able to get someone to facilitate my transportation to the hospital, I have to use herbal medication or send someone to get me over the counter drugs. (sometimes I go by myself, especially when the road is clear when it has not rained). (*Male participant 30yrs, code 089R)

Weighing scale, examination couch, delivery table and patient bed: In order to design a product that could provide perfect user experience for all type of its users, comfort parameters should be the main design criteria, however defining strict design criteria for a product is a challenging task which is also the case for the hospital weighing machine, examination couches and delivery table for the PWPDs.

The comfort of these devices influences the users both physically and psychologically and influences the work efficiency of the medical personnel as they often operate with these devices therefore in the design process of hospital devices for both PWPDs and medical personnel should be taken into consideration in order to determine comfort parameters. After spending great deal of time monitoring PWPDs home, transport, bus stop, inside vehicles, environment's, the frequented participants encountered challenges accessing un adjustable examination table, delivery table and in-patient beds. PWPDs are rarely consulted or represented in the design of equipment before purchasing. If the healthcare needs of PWPDs are to be prioritized, healthcare will be inclusive. Inclusive health encompasses the entire system of health care from laws, policies to service delivery.



Map of Gem sub- county, Siaya

Affirmative action to ensure that PWDs along with others whom are stigmatized or discriminated by society receive due health services so that they contribute to the overall development of a community. The administrators' ill treatment and negative perceptions of PWDs were important barriers to accessing services, attitudes towards disability were found to be negative with poor knowledge and skills about providing services to PWPDs.

Throughout the study, PWPDs have unequal access to healthcare services, have greater and unmet health needs and they experience poor health provision. A proper assessment by a suitably qualified professional is important, in order to make sure that the correct piece of equipment is chosen. The current safety standard for hospital beds is Basic Safety and Essential performance of medical beds (BS EN 60601-2-52) which came in force on 1st April 2013. Profiling hospital beds which are electrically adjustable enable users' position to be changed without strains for anyone involved. (BS EN 60601-2-52) has been systematically reviewed by experts to ensure its confirmed market relevance and adherence to clinical best practice.

*"Doctors do not create good rapport with me at the reception. I am not weighed because I cannot fit the weighing machine. My blood pressure is usually taken while I am on my wheelchair as they concentrate on my disability and do not give me any education concerning my conditionam always with urine retention and positioning me on the examination coach is not a priority."(*Male participant 65yrs, code 056M)

Community health care infrastructure related barriers: Accessible toilets are an absolute necessity, their spaces, their design features allow wheelchair users and individual with arrange of disability to use the toilets as independently and safety as possible for PWPDs. A crucial part of inclusive space, a higher toilet seat, there are no proper toilets structure, the environment around the toilet is grassy, the ventilation is poor so the toilets are dark when doors are closed (there is no electricity or other sources of light), the doorways are not wider than norm also that wheelchair users can easily roll in and out.

There is threshold obstructing the entrance with heavy weight wooden doors that is opened with much force with no horizontal grabrail for support, stability and balance-without them PWPDs have to hold anywhere which is unhygienic and unsafe. Even though the doors were open outward, which means the doors can still be opened easily in an emergency situation if someone has fallen on the toilet floor but the toilets are narrow hence cannot accommodate wheelchairs users, PWPDs with balance issues, grips issues, or other conditions that make rails useful. No hand washing water, soap/sanitizer, hook and toilet paper no sign posting.

A participant linked these observations with perceptions with theories on equality, what is discriminatory at the service delivery level and is often overlooked in the process of physical planning in health facility environment. No strict regulations and concerted efforts exist at the implementation and managerial levels to ensure the free mobility of disabled persons as a matter of their citizenship and rights that would have enabled them to pursue their day to day task

Heath facility toilet codes M002, R001and N001

"With no accommodative washrooms, I am forced to crawl to public toilets with no water to wash my hands. Wherever I go to hospital, I do starve and do not allow myself to be there for too long or to be admitted because of that. "(Female participant,57yrs code 085R)

*"All sign posts are present but not designated for PWPDs, no directive measures put in place and we do not know the path to follow with no assistance in the hospital. Sometimes limited opening hours do not allow for dealing with emergencies and the request for more healthcare providers to be employed so that i do not que on waiting bench with non-PWPDs (*Male participant19yrs,code 090R)

Environmental and architectural barriersare conditions in the physical environment in which health services are delivered. This includes transport, outdoors and indoors environments of the building, (for example, approach road, entrance-exit, waiting room, washroom, toilets, beds and tables with adjustable height etc.) where health services are provided. However, the photograph indicate that the outdoor and indoor environments of health outlets is significantly poor in terms of ensuring a barrier-free access for PWPDs with mobility impairment.

Both the gender and distinctive wise values indicate that the so-called inclusive health care arrangements do not take-board disabled people and do not seem to address their health needs. Although laws and policy instruction are in place to make outdoor and indoor environments and public buildings barrier-free and accessible for disabled people, inaccessibility was noticed as an obstacle.

For instance, in this health institution, there is no smooth approach and ramp to reach the entrance and enter the building. Furthermore, the floor is broken, slopes are zigzag in manner and this becomes frustrating. With wires supporting the electricity pole, wheelchair users have to exhaust their arms while trying to navigate between the stones and the pavement.

Heath facility outpatient surrounding code R001

DISCUSSION

Community related factors: Worldwide, health conditions associated with disability result in poor health and extensive healthcare needs countries (WHO, 2018a).Community beliefs and taboos also influence ability to access quality healthcare among people with physical disabilities. Some members of the community view disability as a curse hence do not expose their disabled kids to the public This is in agreement with a research from urban and rural Andhra Pradesh who found that disability was a punishment or a curse from God and that there is no place for them in heaven (Subramaniam *et al.*, 2017).
This study reveals that negative attitudes toward individuals with physical disabilities have been cited as an important barrier, leading to poor communication with healthcare providers and the provision of inadequate care. This is in agreement with several studies which revealed the challenges PWPDs face in accessing healthcare services (Ganle *et al.*, 2016). Field & Archer, (2019) also found that they are unable to receive essential healthcare in their lifetime while general public also have poor attitude towards people with physical disability. They view these people as outcasts hence are always reluctant to help them get along with their activities. This is in consistent with a report by Choi *et al*, (2019) which revealed that persons with physical disabilities experience discrimination, stigma, lack of informed consent regarding the medical procedures to be performed on them. Unfriendly infrastructure and un adjustable examination tables and bed as key obstacles to persons with disabilities enjoying health care services that could also result to wrong diagnosis and treatment (DeBeaudrap *et al.*, 2019).

In the view of awareness raising, it should be done by trained extension health workers and community health volunteers to help educate and inform public about their conditions/illness (PWPDs), coordinating diagnosis and do away with cultural practices, beliefs and taboos and negative attitudes. Being more informed about causes and aetiology of the disease or physical disability helps to change the community's beliefs and perceptions and gain support for PWPDs, thereby reducing stigma and increasing self-esteem (McClintock *et al.*, 2018). Educating the community can positively impact access to healthcare services. Some PWPDs are neglected and not taken to healthcare facilities for rehabilitation appointments at an affordable cost or free. When PWPDs are motivated by the healthcare providers and have a voice in their treatment, they are more likely to access healthcare services. Proper coordination between health extension workers, other professionals and adequate specialists with equipped health facilities to avoid referrals out of the sub county; this in turn will motivate PWPDs to seek healthcare(Bodenheimer, 2008).
This study revealed that the community health facility checklist score that all the major hospitals are not adequately equipped to handle PWPDs with the highest scoring32% and the lowest scoring 14% and this is considered as a barrier for PWPDs. The most finding is that all the healthcare facilities had no height adjustable examination couches and tables and weighing scales. Our finding shows the absence to be significantly high. Where there is no height adjustable equipment, it indicates that patients may miss physical examination and even screening of diseases like breast cancer, cervical cancer or patients may be examined sited or lifted on the examination couch. Diagnosis may be missed if a patient is not well positioned during a physical examination. Similarly, other studies found that many women with mobility

impairments are unable to access breast and cervical cancer screening because examination tables are not height adjustable and mammography equipment only accommodates women who are able to stand (Thewes *et al.*, 2012). Free registration by National Council for Persons with Disabilities (NCPD) and National Health Insurance Fund (NHIF) in the nearest health facility was mentioned by 7(6.5%) respondents. These barriers are inconsistent with similar access barriers experienced by people with physical disabilities in some parts of Kenya who found that the process of registration by NCPD was taking too long (approximately one year), given registration was only carried out in Nairobi. This is despite NCPD establishing regional offices whose main purpose is to collect forms and send to Nairobi at a cost of KShs 500-1500 (KNCHR, 2014). The study also found that more than half of the respondents from North Gem 16(94.1%), West Gem 11(68.8%) and East Gem 14 (93.3%) had not accessed the nearest health facility in the previous three months. Distance has been identified as a major barrier, as transport costs are often too expensive, especially the extra cost of carrying assistive devices like wheelchairs, to add on, the access barriers to healthcare experienced by PWPDs corroborate what other researchers have reported (Eide, *et al*.2015).

Conclusion

Evidence shows that PWPDs experience low education level, unemployment and low average monthly income, community physical disabilities unawareness, physical and environmental inaccessible equipment and healthcare institutions were frequently mentioned. The study highlights the importance of adequate monthly funding, health insurance, creation of awareness on physical disability and measures to ensure the rights of PWPDs to healthcare services are put in place and implemented under legislation and policy. Unfriendly infrastructure of the hospitals is a healthcare related factor that influences access of healthcare among people with physical disabilities. Kenya has specific obligations under legislative and person with disability Act 2003 to respect, protect and ensure the rights to health for PWPDs. Further research is required to explore ways to remove barriers to access healthcare.

Recommendations

The County Government of Siaya should enhance the formation of active, community-based advocacy groups for PWPDs, to educate the public on physical disability, aimed at removing the barriers faced by PWPDs in the environment, infrastructure and information acquisition. This will not only ease, but also encourage increased activity among the PWPDs, raising their chances of seeking health services.

Competing Interests Statement

I, Owuocha Dorice Akoth, declare that I have no significant competing financial, professional or personal interests that might have influenced the performance or presentation of the work described in this manuscript.

Acknowledgement

The authors wish to thank the committee on human research, publications and ethics. we would also love to thank the university of Jaramogi Oginga Odinga University of Science & Technology for the study protocol prior to its implementations, granting us the opportunity to take a course in Masters of public health degree in Health Promotion. we must sincerely recognize support from the lectures and our peers at the. university extra-mural studies for the support and direction in any respect towards the completion of this manuscript.

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