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Alternative travel mode for commuters with disability in Accra: The lived experiences of Uber and taxi users

Prince Kwame Odame^{a,*}, Regina Obilie Amoako-Sakyi^b, Albert Abane^b,
Manuel Nii Martey Mensah^b

^a Department of Geography Education, University of Education, Winneba, Ghana

^b Department of Geography and Regional Planning, University of Cape Coast, Cape Coast, Ghana

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ABSTRACT

This paper explores the alternative travel mode choice among persons with disabilities (PWDs) in the city of Accra. With a limitation in the ownership of private cars among PWDs, public transport plays a critical role in connecting them to various life enhancing opportunities. Despite its importance, the unresponsive nature of Ghana's public transport services and poor attitudes towards the disability community have induced the need for a reliable alternative travel mode hence the need to examine factors that influence this trend in Accra. Using a qualitative research design, this study engaged 28 visually and 22 physically impaired participants through convenience sampling and snowballing. Findings revealed that the lower fees charged for conventional public transport services informed their patronage but the ease, convenience, exclusive services and the friendly reception from Uber drivers remained the key attraction for the increasing trend in their patronage of such services. Unfortunately, higher fees associated with Uber services translated to few trips and fewer social engagements. The study recommends an overhaul of Ghana's public transport system by ensuring strict compliance to the transport provision of Ghana's Disability Act given its potential to increase PWDs' travel options as seen in the enjoyment of lower transport fares.

1. Introduction

Access to services and the ease of movement in the physical environment mimics a person's identity, guarantees independent living and further sheds light on the quality of life exhibited within every country (Goggin, 2016). Though not considered a basic human right, the absence of transport services may hinder the enjoyment of key facilities relating to health care, education and recreation (King et al., 2018). While cataloguing the benefits derived from the transport services, researchers have raised concerns about how the design and provision of transport services seem to favour a specific travel population leaving other groups like persons with disability, the aged and children. To Frye (2013) and Ferreira et al., (2012), the focus on specific travelling groups stems from government and policymaker's decision on a mobility inclined planning regime that centres on minimising travel impediment like distance and time without paying attention to accessibility issues inherent in the movement of all travelling groups.

With a global representation of 15 % of the world's population, the

World Health Organization (2011) defines disability as an interaction between a person with impairment and their environment that hinders their ability to participate in any activity. At all levels, persons with disability (PWD) are known to be represented in the poverty gap and are mostly found with lower levels of education, economic and social status. To Adam (2019) and Sawadsri (2010) such predicament can be attributed to society's poor understanding of the needs of PWDs which extends to their transport and mobility needs. Low attention to transport needs and increasing poverty levels in the disability community have been identified to reduce PWDs travel options since the ownership of private cars within this group is minimal especially in low and middle-income countries (Park & Chowdhury, 2018; Schwanen et al., 2015). In this regard, public transport services have become an easy attraction to persons with disability partly due to the availability of such services and their broad scope of operation. Public transport in this case, refers to commonly shared transport options that come at a fee and in the case of Ghana this comprises publicly shared minivans or taxis. Among the two, the publicly used minivans which are loosely referred to as 'trotro' are

* Corresponding author.

E-mail address: pkwameodame@uew.edu.gh (P. Kwame Odame).

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the most preferred among the low and middle-income population due to the low fares charged and the relative ease of getting access to such service (Tetteh et al., 2017).

While trotro services dominate trips in Accra, Hotor (2016) cites inefficiencies like delays in getting to destinations, breakdown of buses, inconvenience and non-compatibility between PWDs needs and service rendered as crucial issues driving the search for reliable transport options though these services come at a much higher fee. At present, the search among various travelling populations in Accra appears to tilt in favour of Uber given that 86 % of respondents in Dzisi et al.'s (2020) study claimed to be familiar with and have used Uber services before. Unfortunately, research on the patronage of Uber services in Accra has focused on the travel need of the general population (Dzisi et al., 2020), the effect of Uber's operation on traditional taxi services (Kufuor, 2018) and the operational characteristic of Uber partner drivers (Agyemang, 2020). Despite the role of these studies in improving knowledge and practice, the focus on the general population erroneously assumes a homogenous travel population that annihilates the travel issues and visibility of minority travellers like those with disability. It is therefore in this light this study is undertaken to examine factors that influence the patronage of Uber services among the disability community in Accra.

This paper focuses on exploring how emerging transport options like Uber have filled the gaps in delivering transport services to minority travel populations like those with disability. Instead of focusing on quantitative data, the study relies on PWDs lived experiences in their use of trotro services as well as focus on the factors that influenced observed demand for e-hailing services like Uber.

2. Literature review

2.1. Ghana's disability Situation.

While constituting 3 % of Ghana's population, the status accorded to the disability population seems to have a socio-cultural connotation which centres on viewing disability as a result of one's transgression or a deity's disapproval of one's moral action (Nyangueso, 2006). This idea has equally influenced PWDs' ability to hold influential status like ascending to chieftaincy titles or occupying prominent roles among the Ashanti's and other tribes in Ghana. By this, children born with a disability have been branded as evil spirits, and evidence of exorcism has been known to be carried out to return these children to the spirit world (Adam, 2019). Such connotations have also influenced society's attitudes towards persons with disability and evidence of this can be seen in the transport sector as indicated by Odame et al., (2020) in their research on campus shuttles services for students with disability in Cape Coast. These situations have reduced opportunities for person with disabilities in making a meaningful contribution to society since the presence of disability is considered in the same light as other social deviances like murder or contagious diseases (Ostapczuk & Musch, 2011; Šiška & Habib, 2013).

In pursuance of the Conventions on the Rights of Persons with Disability and the need to protect all persons with disability from discrimination, the Ghana Federation of Disability Association (umbrella union of all disability groups in Ghana) and other disability advocates moved for the passing of Ghana's Disability Act in 2006. This law has 60 sections that borders on key themes relating to rights, education, health care, employment, transport and other human development issues. On transport issues, the law enjoins the state to include the needs of persons with disability in the design and construction of all transport-related infrastructure. Additionally, the law also enjoins public transport operators to reserve at least two seats for persons with disability except in cases where no person with disability joins the bus. To register their displeasure towards the government's neglect of this legislative provision, the Ghana Federation of Disability Association sought a court injunction to halt the commissioning of the 14.1 Kilometer George Walker Bush highway since the contractors did not

include any disability facility in its construction (Ghanaweb, 2012).

Additionally, members of the Ghana Blind Union (GBU) and the Ghana Society of the Physically Disabled (GSFD) have also complained about the attitudes of public transport operators especially operators of the minivans or 'trotro'. Evidence of such attitudes has been seen in how transport operators physically obstruct disabled students from joining campus shuttles, the deliberate attempt to ignore disabled commuters who indicate their intention to join a bus, and the non-existence of priority seats on public transport services (Odame et al., 2020). Even in the face of all these challenges, the Ghana Statistical Service (2014) indicates that an improvement in the general attitudes of Ghanaians towards the disability community would reduce the stress of enjoying public transport services. Additionally, Opoku et al., (2017) also call for a more robust implementation of Ghana's disability law since that would offer clarity and protection for all PWDs in the transport and other sectors of Ghana.

2.2. Public transport services in Ghana

Trips to school, work and health care facilities are among the common places Ghanaians visit most using different travel modes (Ghana Statistical Service, 2013). A review of Ghana Household Transport Survey indicates that preferred means of transport to these facilities include both publicly shared taxis and minivans (Trotro) which account for about 35 % of the road space but are responsible for the movement of about 80 % of all passengers and freights movement (Abane, 2011; Ghana Statistical Service, 2013). Public transport services in Ghana is heavily dominated by private sector participation due to the inefficiency of the state in providing transport services for Ghanaians. At present, the Ghana Private Road Transport Union (GPRTU) is the umbrella group for most private transport services and this group is known to control about 70 % of trips made in Accra (Abane, 2011).

The word 'trotro' is a Ga word that loosely translates to '3 pence' and this was the amount paid for public transport services in colonial Ghana (Kommey et al., 2019). While the trotro are known to be the preference of the low-income earners, many studies have raised concerns of its utilization. For instance, Hotor (2016) cites mechanical breakdowns, non-availability of services and delays as key factors that makes this service unattractive to middle-income earners. Additionally, minority travel groups like persons with disability have also registered their displeasure with the use of dilapidated vehicles that do not conform to any disability standards including the dictates of the Ghana Disability Act. A study by Odame (2022) further revealed how the absence of disability-friendly facilities and poor attitudes of transport operators towards students with disability resulted in PWDs decline in the use of campus shuttle services. Also, Badu-Agyei (2018) revealed how socio-cultural inclination and low education on disability among commercial transport operators had heightened barriers in using public transport among the disability community and other minority groups.

Aside from the GPRTU, the state also offers public transport services through the operations of the Metro Mass Transit (MMT) services which commenced in 2003 (Yobo, 2018). As a form of a welfare package to vulnerable populations, the MMT charges 20 % less than the market fee for ridership and also offers free ridership to school children who join MMT buses in their uniform (Birago et al., 2017). For the disability community, the MMT did not offer free ridership but resorted to acquiring disability-friendly buses that comprised facilities like ramps, priority seats, designated areas and assistive communication technology (Yobo, 2013). Unfortunately, Yobo (2013) purports that the decision to charge 20 % less the market rate has also made it difficult for MMT to maintain its fleets and stay in business. By this, attention was switched from delivering intra-city transport services (which benefited more vulnerable populations) to intercity or long-distance services since it was much easier to stay in business with this new business direction.

2.3. Uber services in Accra

Prior to its operations in 2016, Uber sought the approval of Ghana’s Ministry of Transport to permit its ride sharing technology as well as regulate the use of its technology by riders, drivers and the company itself (Kufuor, 2018). As a marketing strategy to consolidate its popularity among the travelling population, Uber offered complimentary rides for 3 days and this was only limited to Accra (Adotey, 2017). Of course, the eligibility criteria to these free rides hinged on downloading the Uber App and signing up with one’s personal information. Like other ride sharing services, Uber charged a penalty of 5 Ghana cedis or \$1 for cancelling an accepted request or booking since this was deemed a way to deter people from abusing their service.

With the aim of providing affordable and reliable transport options by leveraging on increasing penetration of mobile technology in Ghana, the use of private cars for Uber services spiked. Aside from the fact that Accra has the highest private car population in Ghana, the use of private cars also spared drivers from the payment of fees associated with commercial taxis (Adotey, 2017). These include the cost of insurance, payment of Metropolitan levies, and other fees related to commercial transport activities in Ghana (Kufuor, 2018). Additionally, the use of mobile application spared operators the headache of looking for passengers hence a considerable reduction in fuel cost for drivers who sign up to join Uber services. For the working class or middle-income earners who owned private cars, the emergence of Uber also offered an opportunity for an alternative source of income hence the popularity and expansion of Uber services to other parts of Ghana (Paronda, 2017).

Just like the operators, preference for Uber services among various

travelling groups in Ghana has been identified by Dzisi et al., (2020) to be associated with the novelty in price determination, use of private cars as against conventional old fashion cars as well as the use of technology.

3. Study setting and methodology

Accra Metropolitan Assembly was selected for the study since it sites the national capital, is the most populous metropolis (with nearly 1.7 million people) and has the highest vehicular population, including private and commercial cars (Ghana Statistical Service, 2014b). Also, Uber began its operations and still has its corporate office in Accra. Beyond these, the 2010 Population and Housing Census data from the Ghana Statistical service cites Accra (Fig. 1) to have the highest urban disability population (22,471) hence the decision to undertake this study in this area. An exploratory research design was adopted since it offered a suitable platform to unearth new ideas or seek understanding on issues that have received little attention, as in the case of PWDS alternative travel issues and factors that influence their preference for Uber services (Creswell, 2018; Davies, 2011). Participants for this study included the visually and physically impaired since these groups constitute about 65 % of Ghana’s disability population (Ghana Statistical Service, 2012). Regarding the use of the physical environment, Gregorius (2014) identifies these two disability groups to be the most affected and by this, addressing the mobility needs of these two groups may also address the needs of other disability types.

While focusing on only the travelling population among the disability community, the selection criteria for participants required them to be at least 16 years (minimum age of consent), work or school in

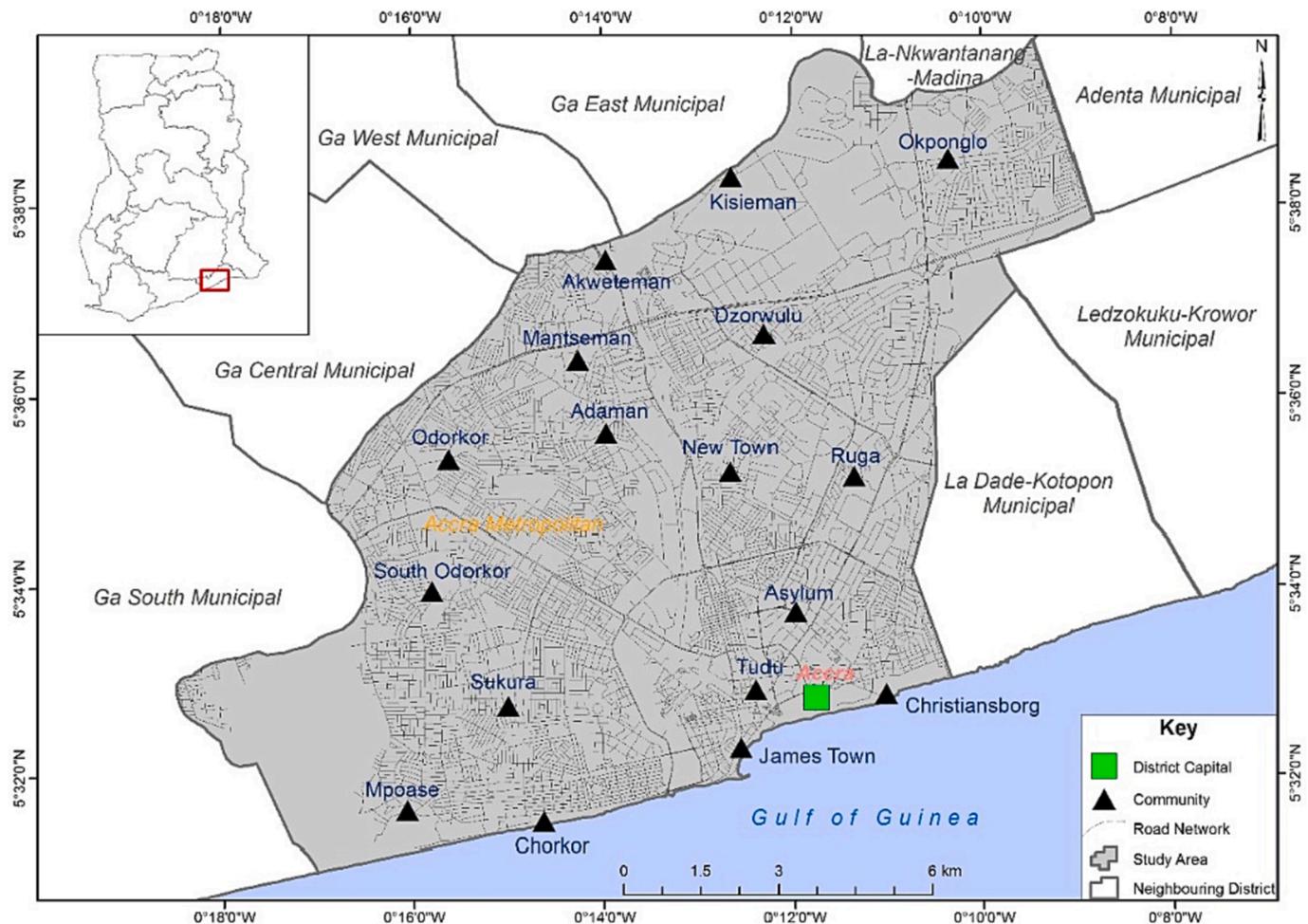


Fig. 1. Map of the Accra Metropolitan Assembly.

Accra as well as engage Ubers' services within the last three months (using the time of interview as the reference point). Before collecting data, the research protocol and instrument were reviewed and approved by the Institutional Review Board (IRB) of the University of Cape Coast. Here, a semi-structured interview guide was used as the data collection instrument, which offered participants the flexibility of expression and gave the researcher the ability to seek clarity to responses and also obtain non-verbal responses (Eberle, 2019; Gubrium, 2012).

Data collection spanned from February to May 2020 and the outfit of the Ghana Federation of Disability Association (GFD) in Accra became the first reference point since it harbours the office of the Ghana Blind Union (GBU) and the Ghana Association of the Physically Challenged (GSPD). Upon first contact and successful interaction with the leadership of the GBU and GFD, the first author was invited to attend a monthly disability meeting that offered a broader platform to interact with a cross-section of the disability community. At this meeting, the corresponding researcher was offered an opportunity to interact and inform attendees about the study. All prospective participants who met the selection criteria and agreed to engage in the study were reached through convenience sampling. Membership to the two disability groups was voluntary and with low turnout at this monthly meeting, the researcher turned to snowballing using the social contacts of the executives or leaders of both disability groups. In all 50 participants comprising 28 visually impaired and 22 physically impaired were engaged.

Flexible interview schedules were developed to ensure maximum participation and all interview sessions were conducted in Ga or Twi except for a few participants who preferred to use English as a communication medium. Though the duration of the interviews ranged from 35 to 80 min, the interview approach comprised in-person sessions carried out between February to March 2020. Other interview sessions were conducted over the telephone due to the outbreak of COVID-19 and the subsequent designation of Accra as a hotspot. The entire data collection process ended in mid-May of 2020 and all issues relating to ethics were upheld. This includes seeking participants' informed consent to engage in the data collection, permission to record interviews, and other issues relating to confidentiality and anonymity.

Data were transcribed and edited by the first author using Otranscribe. With an inductive thematic analysis in mind, all authors read the transcripts to become familiar with the content and also discussed emerging ideas crucial to developing a coding framework. On reaching a consensus with the coding framework and subsequently relating key ideas, differences and similarities were identified in the transcript. The corresponding author then mapped the ideas to various themes while identifying and extracting key text or excerpts needed for further emphasis or narrative. All these were done using MAXQDA. The analysis was iterative as the study sought to illustrate a wide range of key views and concerns relating to PWDs preference and patronage of Uber services. On noticing differences in opinions, such differences were explicitly stated and supported by the needed data. At all times, anonymous quotations were employed to highlight the perspectives of PWDs and also support the interpretation of themes.

4. Results and discussions

To contextualise the study's findings, participants' background characteristics are provided in Table 1 to offer a deeper appreciation of the issues relating to PWDs' perception of trotro services and their subsequent preference for Uber services.

4.1. State of public transport services (Trotro)

Participants identified trotro services as their primary mode of transport though they wished for an improved service. When asked what informed their choice of trotro services in Accra, common responses included:

Table 1
Background characteristics of participants.

Social demographic variable	Percentage
Sex	
Male	67
Female	33
Types of impairment	
Visual	56
Physically	44
Extent of impairment	
Total Blind	38
Wheelchair	27
Partially Blind	19
Crutches	8
Skeletal deformation	4
Calliper	4
Profession	
Private formal	8
Private informal	17
Public formal	33
Public informal	4
Other	13
Unemployed	25
Marital Status	
Single	83
Married	17
Highest Level of education	
Tertiary	44
Secondary	5
Basic	36
None	15

If I am going by trotro, then economic reasons will be the factor. If I join a taxi, I would be charged 30 or 35 Cedis (\$5.18-\$6.04) but a trotro will charge less than 5 Cedis(\$0.86) and I will have extra money for other activities [Male visually impaired National Service Person]

To participants, the relatively cheaper cost of using trotro services was the prime reason that attracted them to opt for the service and this revelation does not come as a surprise since Ghana's disability population has been identified to be well represented in the poverty bracket (Ghana Statistical Service, 2014a). While the factors that influence the choice of a transport mode differs in context, participants' decision to settle on cost as a determinant in choosing trotro services may also translate to a sacrifice of other factors like their comfort and convenience as indicated by Adom-Asamoah et al., (2015). In perusing the data, this decision was popular among participants who identified as unemployed and those with little or no formal education. When asked to indicate their weekly frequency of using trotro services, participants mentioned 80 % to 90 % since trotro services were their primary transport option except in cases where they travelled in groups for religious or when they were offered lifts. Additionally, Yobo (2013) purports that higher fares charged for other transport options like taxis and the absence of travel concessions for vulnerable populations further increases vulnerable populations' dependency on public shared buses like trotro. On the other hand, the economically active participants indicated their weekly frequency of using trotro services to be between 70 % and 80 % and this usually exclude weekends and some occasions where trotro services were either unavailable or when access becomes a challenge.

Apart from the cost, participants lamented about the absence of physical support services and poor attitudes of both transport operators and passengers as crucial contributory factors to their growing interest in other modes of transport though the cost of these modes deters them from enjoying them more frequently.

4.2. Choice of alternative transport mode

Amid the barriers inherent in participants' use of trotro services, the choice of an alternative mode of travel offered a suitable platform to

escape the daily reality of using trotro services. In this regard, participants' choice of an alternative mode could be revealed by examining commuters' level of satisfaction derived from each transport mode. A common term usually attributed to this concept is Service Quality (SERVQUAL). In line with this, Mensah & Ankomah (2018) and Ojo et al. (2014) have identified tangibility, cost, reliability, assurance, empathy and responsiveness as variables that inform travellers' choice of given transport services. In this section, emphasis is shifted from the monetary cost of travel since most participants have cited low fares as a prime reason why they prefer trotro services.

Among the different transport options in Accra, participants were more vocal in their preference for e-hailing services like Uber and Taxify as well as the chartering of taxi services. When asked to clarify the reasons that informed their choice, the following remarks were given.

The Uber drivers are polite, quite professional and since you have to rate them at the end of the trip, they are mindful of what they do. I think that the drivers are supposed to get some rewards with regards to their ratings. They try to be professional and all that is just because of those little checks [26 year old visually impaired male Public Servant].

The taxis and Ubers are most of the time convenient. Whatever happens, you know that they are taking me to wherever I am going. Unlike the trotro, you can't tell the driver to move at your pace and also do what you want. [33 year old visually impaired male radio presenter]

Remarks from participants identified chartered taxi and Uber services as a suitable alternative though the cost of usage still affected participants' frequency in using these modes of transport. A leading factor that prompted this choice was the demeanour or attitudes of Uber drivers in particular. Unlike the trotro operators, participants cited politeness and respectfulness as common traits that characterised the delivery of services among Uber drivers. Emphasis was laid on the delivery of support services, which ranged from driver's eagerness to ensure the safety of PWDs by personally helping them join the vehicle and the delivery of same services when participants disembarked from the vehicles. Such disembarking services were identified to include assisting PWDs' to cross the street, locate transit services for those in transit or in some cases even walk participants to their homes. Participants attributed Uber drivers' quality of service delivery and general attitude towards PWDs as a result of their higher educational levels. This is in sync with Mensah's (2018) assertion on how higher educational attainment among Uber drivers in Accra translates to the display of good business etiquette. Though educational attainment seemed to influence positive attitudes, Nyame & Hague (2013) purports that knowledge of a concept does not always translate to practice but no case of hostility by Uber drivers was recorded in the study.

With Uber's aggressive marketing scheme, subsequent growth in popularity and usage among many young people, participants further mentioned that taxi drivers' positive attitudes were executed with the intention to keep loyal customers since the market share of taxi drivers in Ghana has been heavily impacted with the introduction of other transit services such as tricycles (Jing et al., 2019) and Uber (Mensah, 2018). For Uber operators, participants also indicated that positive attitudes received were informed by drivers' desire to get a good rating and review for the quality of service rendered. This assertion was confirmed by Chan (2019) and Athey et al. (2019) who identified Uber rating system as a key indicator of drivers' employability since Uber terminates the services of drivers who consistently record lower rates and also have poor reviews for their services. To Marquis et al. (2018), this behaviour control measure has induced drivers to offer the best business etiquettes and also increased the attractiveness of Uber services amid other options.

The second key factor that informed participants' choice for Uber and Taxi services was the relative convenience associated with ordering a ride from one's home through mobile technology and this was mentioned by both physically and visually impaired participants. This innovation prevented participants from the strenuous task of walking to

transport terminals/ bus stops or queuing for buses and sometimes being refused entry by trotro operators at bus stops. These views also confirm Kett et al. (2020) position on how technology has increased PWDs travel independence as evidenced in the popularity of Uber services in the US or UK. Additionally, the exclusive services offered by Uber and Taxi chartering services further extended the level of convenience to include flexibility in choosing a preferred route or enjoying extra services like air conditioners which trotro services do not offer. In view of the foregoing discussion, Uber thrives on keeping passengers for longer period of time and though the Uber app always selects the shortest path connecting an origin to a destination, any request from passengers to divert from a predetermined route would always be welcomed since this translates into higher sales for drivers (Kufuor, 2018).

Termination of services in close proximity to the passenger's destination is another reason assigned by PWDs for their choice of Uber and Taxi chartering services. To participants, this advantage reduced the time spent in waking or wheeling to a destination. Unfortunately, participants also singled out this exclusive service as a source of worry for them due to fears for their personal safety which could not be assured at all times. Their fears centred on the likelihood of being kidnapped, robbed or used for ritual killings but no record of such incidents were mentioned by participants of having been witnessed among the PWD community.

Other issues of comfort that attracted participants to the use of these services were the conditions of cars used for both Uber and Taxi services. To participants, most Uber operators mostly used private saloon cars which were in better conditions as compared to the trotro. These conditions manifested in the spacious seats, good conditions of the cars' interior which included the absence of protruding objects and rusty metals. Though the use of private cars were seen to be popular in Accra, Nyarko (2019) and Penu (2018) consider this situation to be an anomaly since the use of private cars for commercial purposes was a breach of Ghana's Road Traffic Act, 2012 (LI 2180). This law explicitly requires taxis to be identified by approved identification colours and owners are also required to pay statutory charges and taxes. Unfortunately, the non-payment of these fees and use of unprescribed colours have been revealed to create an unfair advantage for Uber operators since their cost of operation was relatively lower than traditional taxi operators (Adotey, 2017). Concerns of such unfair advantage has been cited to be the cause of scuffle and violent clashes between traditional taxi and Uber operators in Pretoria, Nairobi and Accra (Kuo & Mohammed, 2016; Simmons et al., 2019).

It is important to add that the low floor height of Uber vehicles facilitated the travel independence of wheelchair users while joining and disembarking from such vehicles since it reduced their likelihood of crawling or requesting assistance from transport operators.

4.3. Frequency of using transport modes

Having identified participants' alternative mode choice, the study further sought to examine the frequency with which Uber services were enjoyed. The focus on frequency was based on participants' weekly account of the number of times they joined Uber. The following are remarks from participants:

It shouldn't be more than once a week. The trotro is my favourite due to my financial standing but Uber gives better options [43-year-old male visual impaired Civil Servant]

It depends on the occasion. Occasionally, if I am supposed to go somewhere on time, Uber or Taxi becomes the first choice. Also, when trotro is barred from reaching my destination, then I will decide to travel with Uber [25-year-old male visually impaired National Service Person]

Remarks from participants indicated a lower frequency for their weekly patronage of Uber or taxi services. The data additionally revealed that, some participants could go a month or two without ordering Uber services or chartering a taxi. This was common among

both sexes but more prevalent among participants with lower educational backgrounds which the Ghana Statistical Service (2014) identifies as being represented in the poverty bracket. Despite the desire to enjoy such services, a common denominator that affected participants' usage of Uber or Taxi was the relatively higher fares charged for such services. In the case of Taxi services, Mensah & Ankomah (2018) and Simmons et al. (2019) purports that the absence of a standardised mechanism to determine the cost of taxi services worsened the plight of PWDs due to the difficulty in budgeting for their trips. This is because the actual fare for chartered taxi services was always determined by the negotiation skills of both commuters and drivers. This has been found to have resulted in varying fares charged for the same distance giving rise to participants' account for their low frequency of use even though they wished to enjoy it more.

On the other side, though Uber offered a standardised process in determining fares, the use of distance and time-based algorithms also presented some challenges to participants. This is observed in discrepancies in the fare at the onset of a trip and those revealed at the end of the same trip. Just as distance always remained constant, participants complained that traffic congestion, road accidents and other incidents beyond the commuter's control increased travel times leading to proportionate increases in fare. Additionally, participants also complained of higher prices even though the distance and time of trips remained the same. This concern is confirmed by Cachon & Daniels, (2017) and Zha et al. (2017) that ride-sharing services offer differential pricing schemes for the same distance and time without considering the plights of its users. Such a situation is termed as Price Surging and is known to comply with the economic principles of demand and supply where Uber charges higher prices when demand for its services exceed supply and vice versa. These uncertainties also increased PWDs' difficulty in planning for trips and in many occasions, trips by Uber services were limited to essential and high-profile meetings that were seldomly undertaken.

Other travel modes identified in the study were the use of private cars, which were more common among visually impaired participants from high-income households. Here, participants mentioned the opportunity of being driven to various destinations but also expressed their desire to use Uber and Taxi services because these private cars were not always available for use.

5. Conclusion

Based on the findings of the study, the following conclusions were reached. Firstly, the use of conventional trotro services remained the dominant means of transport among persons with disability in Accra. The choice of this mode was primarily informed by the lower cost associated with using this travel mode. Despite usage, higher floor height, poor internal designs and hostile attitude of trotro operators were prominent in reducing PWDs desirability for trotro services.

Amidst the desire to seek a responsive travel option, Uber and chartered Taxi services were mentioned as the most preferred travel option among the disability community despite concerns about higher fare charges. Topical among the pull factors towards Uber was the use of mobile technology in requesting a ride and their enjoyment of exclusive services. Additionally, the condition of private cars with respect to low floor height, spacious seats and other services like air conditioners also increased PWDs preference for this service. Also, excellent reception received from Uber drivers was mentioned as a dominant factor for choosing Uber over other services among study participants.

A major setback to the use of these travel modes was the unpredictability of the fares since changes in travel time was known to disproportionately influence the determination of fares for Uber. In the case of Taxi services, the cost of travel was always left to the negotiation skills of both passengers and transport operators. Other issues of concern to PWDs related to their personal safety given their perceived fear of robbery, kidnapping and ritual murder while using exclusive services.

6. Policy implication

The results of this study presents some implications for the management of public transport services in Ghana. By this, enforcement of the transport provisions of Ghana's Disability Act may compel operators of public transport to overhaul its services by acquiring adaptive buses with ramps, priority seats or designated areas and assistive technology. Such responsive services have significant implication for PWDs quality of life since it offers a broader and cheaper travel option as compared to uber services. Here, a collaboration to establish operational guidelines for the public transport services may go a long way to establish barriers that may restrict the entry of sub-standard buses and also educate transport operators on the travel needs of the disability community. Such activities can be executed by key agencies like the Accra Metropolitan Assembly, Ghana Federation of Disability Association and the Ministry of Transport.

In the short run, the Department of Social Welfare and other disability agencies can engage Uber on the possibility of offering concessions to PWDs who engage their service. This may constitute Uber's social corporate responsibility to Ghana since the disability community are known to be well represented in Ghana's poverty bracket.

7. Limitation and areas for further research

Though this study sought to unearth the transport issues of the disability community, the focus on only the visually and physically impaired did not make room to present cases of other disability groups like the deaf, non-verbal and persons with cognitive disabilities. Furthermore, though the study exposed the living conditions of the PWDs, none of the researchers had a disability and this might have influenced researchers' ability to fully appreciate and contextualise the travel needs of participants. Also, the emergence of COVID-19 forced the researchers to engage some participants through telephone interviews which deprived the study of non-verbal responses that would have helped to situate the study in context. Finally, the adoption of a qualitative research design may have offered a detailed narrative on participants' views but the findings of this study cannot be used as a basis for generalization and may not mimic the experiences of participants in other parts of the country.

CRedit authorship contribution statement

Prince Kwame Odame: Conceptualization, Methodology, Investigation, Data curation, Software, Writing – original draft. **Regina Obilie Amoako-Sakyi:** Supervision, Writing – review & editing. **Albert Abane:** Supervision, Writing – review & editing. **Manuel Nii Martey Mensah:** Investigation, Visualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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