



## Using Photovoice in Disability Research in the Global South: Methodological Lessons from Ghana

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Received on: June 16, 2021. Accepted on: November 28, 2021

### ABSTRACT

Photovoice is a participatory action research approach that empowers and gives a voice to the people who have little or no voice in policy decisions. This approach has been used in diverse settings, social problems, and marginalized populations. Although photovoice has been employed in disability research, most studies were conducted in the global North. Also, there is dearth in the literature about methodological challenges and lessons learned while using photovoice involving persons with disabilities. This paper discusses methodological challenges and lessons learned in using photovoice to understand transportation and built-environment barriers that persons with mobility disabilities encountered in the Accra metropolis of Ghana. The lessons could guide future research and probably encourage more of researchers to use photovoice to advance policy and practice decisions that could improve the full-effective participation and inclusion of persons with disabilities in the global South, where poverty is more concentrated.

*Keywords: Photovoice, Ghana, Disability, Accessibility, Methodology, Global South*

### INTRODUCTION

Photovoice is a participatory action research (PAR) approach developed in the late 1990s by Wang and Burris (1997) to promote women's health. The approach targets marginalized groups in the community and seeks to achieve three main goals:

“To enable people to record and reflect on their community's strengths and concerns,

To promote critical dialogue and knowledge about important community issues through large and small group discussion of photographs and

To reach policymakers. (Wang & Burris, 1997, p. 2).”

The photovoice method uses a blend of photographs and narratives to enable participants to share their unique stories about social problems. It is a tool that helps communicate community needs and triggers social action to address concerns (Wang & Burris, 1997). Under this method, participants are given cameras to take pictures to tell their stories from their perspectives. They communicate their experiences and feelings through pictures.

This study employed the photovoice approach to understanding the daily experiences of persons with mobility disabilities regarding transportation and built environmental

accessibility challenges and how they affect their lives. The approach was utilized because it is participatory, empowering, and gives a voice to the chosen population, persons with disabilities, who usually have little or no voice in policy decisions (Wang & Burris, 1997). The participatory action research approach is encouraged in disability research (Minkler et al., 2002) to empower persons with disabilities. This approach also enables persons with disabilities, who are expert knowers of their issues, to be part of and contribute to finding effective and sustainable solutions to their problems. Training in photography, ethics, critical discussion, photo captioning, and policy advocacy are part of participatory and empowering perspectives (Palibroda, Krieg, Murdock, & Havelock, 2009).

Since its inception, the photovoice approach has been used in diverse settings and with marginalized populations (including persons with disabilities) and social problems. Although photovoice has been used in disability research, most studies were conducted in the global North. In their study about the scope of literature relating to photovoice research involving persons with physical disabilities, Dassah, Aldersey, and Norman (2017) found that 20 articles were published between 2003 and 2015. Out of that number, only two were conducted in the global South (Ghana- Tijm, Cornielje, & Edusei, 2011 and India- Kembhavi & Wirz, 2009) with an additional one comparing a phenomenon in the global North and global South (Australia and Cameroon- Allotey, Reidpath, Kouamé, & Cummins, 2003).

Also, there is dearth in the literature about methodological challenges and lessons learned while using photovoice involving persons with disabilities. Persons with disabilities are the world's largest minority group and are over-represented among the poor.

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**Cite as:** Naami, A. (2022). Using Photovoice in Disability Research in the Global South: Methodological Lessons from Ghana. *Journal of Disability Studies*, 8(1), Epub.

Most of them (80%) live in the global South, where poverty is predominant (World Health Organization, WHO, 2011). Methodological lessons could guide future research and probably encourage more researchers to use this method to advance policy and practice decisions that could improve on the full-effective participation and inclusion of persons with disabilities in society, in line with requirements of the United Nations Sustainable Development Goals (SDGs) and the Convention on the Rights of Persons with Disabilities (CRPD).

The core value of the Agenda 2030 of the SDGs is leaving no one behind. Hence, six out of the 17 SDGs are disability related. Twelve out of the 169 indicators that operationalize the SDGs are also disability related. Similarly, the Convention on the Rights of Persons with Disabilities (CRPD), the first international disability legal framework, articulates this assertion in the very first Article:

*The purpose of the present Convention is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity.*

This paper discusses methodological challenges and lessons learned while using photovoice to understand transportation and built-environment accessibility challenges encountered by persons with mobility disabilities in the Accra metropolis of Ghana.

## METHODOLOGICAL CHALLENGES AND LESSONS LEARNED

### Recruitment of Study Participants

Education was a requirement to enable participants to caption their pictures and journal their experiences (Wang & Burris, 1997). However, this requirement became a challenge during recruitment due to the low literacy among persons with disabilities (WHO, 2011). Inclusion criteria for participation in the study were having a mobility disability, membership to the organization of persons with disabilities, and education. The researcher added the snowball sampling technique to purposive sampling to augment the number of participants who could read and write and allow for diversity in mobility disability and gender. Although three persons were recruited through snowball sampling, that could not adequately address the issue relating to literacy and gender diversity. Out of the 10 participants, four were females and six were males. Also, four (two males and two females) had basic education, one male had senior secondary school education, one female had a diploma, and two other males were completing higher national diploma and Bachelor of Arts education respectively. Further, two of the participants had no formal education, and they were both females. Gender-disability education disparity is reported in the literature (Naami, 2015; WHO, 2011).

### Data Collection

Low literacy among the target population reflected in the data collection phase, but the researcher devised innovative ways to address the problem. In line with the tradition of the photovoice approach, two workshops were organized, one for data collection and the other for data analysis. After the first workshop, the

researcher made follow-up phone calls, had a one-on-one meeting with the participants and periodic visits to back up data to prevent data loss. The phone calls were used to discuss participants' experiences with photo taking, captioning, journaling, and to find out whether they had any concerns. I realized that most of the participants could not journal their experiences, which hampered photo taking. My periodic visits to back-up data revealed the severity of the impact of literacy on the project. Out of the ten participants, only two could write out their narratives. Additional two wrote a few narratives. Writing challenge was expected but not the actual impact.

I suggested audio-recording to the participants who could not write their narratives, and they agreed. They chose the times and places convenient for downloading their pictures and audio-recording their narratives. They also choose the pictures, which best illustrated their daily accessibility struggles and indicated meanings and messages to the selected photos, which were also audio-recorded. The audio-recorded data were transcribed, and the participants validated their stories. Member checking is important to ensure the trustworthiness of a study (Lincoln & Guba, 1985).

It is noteworthy that the additional logistic cost to ensure in-depth rich data (from the participants who virtually had no education) and safety of data (one-on-one meeting, audio-recording, transcription and validating transcripts) was not part of the initial budget. But it was necessary to gain deeper insights into the daily experiences of persons with mobility disabilities regarding transportation and built-environment accessibility. Also, methodological modification (audio-recording of narrations/captions, transcription and validating transcripts) and the study time frame (two months) enabled large data collection (431 pictures, 153 selected) that reflect participants' daily routines (11 environments) and their struggles (See Appendixes: 1 and 2). The two-month time frame also enabled data collection of two different seasons (raining and dry seasons). The data collection time frame in the current study differs from one global South study (which lasted only a week) which time constraint was identified as a limitation to the number of pictures participants could take (Kembhavi & Wirz, 2009).

Another challenge was that I did not budget for incentives for participating in the project except for refreshment and compensation for travel costs. Given the time between frame and study (two months), there could have been attrition. However, the enthusiastic participants were poised to collect evidence-based data to advocate for transportation and built-environment accessibility. The understanding that their pictures could educate the public and policymakers about their needs motivated keen participation. They maintained momentum, regardless of the project time frame and other challenges discussed earlier, knowing that their voices could be heard. To further demonstrate their enthusiasm for the project, they requested a WhatsApp platform to continue the conversation, which I obliged. Also, they requested that their actual names accompany their pictures and narrations, and the researcher's institution granted an amendment to that effect. It is noteworthy that I received more pictures from participants' phones after the project was completed. Cameras

and/or photobooks were given to participants in some studies (Kembhavi & Wirz, 2009), but these forms of incentives were not part of the budget for this study. Future studies could consider these forms of non-monetary incentives.

#### Data Analysis

The SHOWeD framework by Wang (1999) was used in the analysis (See Table 1). However, it was modified to reflect contextual issues, consistent with Wang's assertion that the framework is adaptable. Low literacy required adaptation in data collection, as discussed earlier, which led to the selection of photos, meanings, and messages to the selected photos at settings other than the workshop.

A key addition to the SHOWeD framework is a question that solicited information about participants' feelings relating to the built environment and transportation inaccessibility: How do you feel about it? Tell me how you feel about the problem in the picture? The researcher believed these questions could enhance understanding of the psychological effects of built environment and transportation barriers on persons with mobility disabilities. The modified framework alongside the SHOWeD is shown in Table 1. Another adaptation regards the conduct of the smaller groups and plenary sessions, which are discussed below.

#### Smaller Group Discussions

Photo selection, according to Wang and Burries (1997) is the first stage of photovoice analysis. Data analysis in this study started with the participants during the one-one-meetings when they selected pictures that best depicted the built-environment and transportation barriers and their narratives recorded. The researcher then grouped the pictures under various environments including, home/apartment and surroundings; transportation and its environment, office and workplaces, school, banking, churches; hospitals and clinics, entertainment/events; business; street crossing and traffic lights; gutters and open drainages; and pavements (See Appendix 1). I projected the pictures on the screen for discussion and analyses by the participants who were put in groups of three. The adjustment in the analysis was necessitated not only because of the low literacy of study participants but also to enable in-depth analysis of the large data collected. Two groups of three and one of four were set up. I assigned each group to pictures taken by its members. They discussed the content and context of their photographs in the smaller groups, as well as the meanings, stories, and messages attached to the pictures. They related these discussions to their collective experiences. The questions presented in Table 1 guided the discussions.

#### Putting it Together: Plenary Discussion

There was a plenary group discussion where perspectives/experiences and recommendations (outcome of group discussions) arising from the smaller group analysis were codified into themes. The patterns and fragmented themes, which were developed from the plenary section, were later rearranged by the author based on the context analysis and the narrations. Both sections of the second workshop were audio and video taped with participants' permission to facilitate content analysis and to serve as a reference point. The author obtained ethical clearance from institution and followed all ethical protocols. The group discussion questions are presented in Table 1.

## FINDINGS, RECOMMENDATIONS AND CONCLUSION

Images could illustrate issues better. For example, presentations of study outcomes triggered various kinds of emotions and reactions of the audiences, including students, academics, public officials, church congregations, and healthcare professionals. Some of them promised to address access barriers in their environments. See a summary of photos depicting built-environmental and transportation barriers (Table 2).

Further, photovoice is a participatory action research tool and promotes the active involvement of participants from start to end, thereby empowering them. For example, although many of the study participants did not have higher education, they were able to express their voices about the barriers they faced through pictures. Also, the study promoted the self-esteem of the participants, given that they could take and express themselves with pictures. They had the opportunity to develop team-playing abilities through in-person and virtual group discussions. The project enhanced their creative skills, which were exhibited in the kinds of pictures they took, the captions and narrations. (See Table 2) and narratives below:

*I cannot go wherever I want to go due to inaccessible transport. I always have to crawl into buses. The buses are usually dirty especially, when it rains, because the dust/mud accumulated from the passengers' feet makes the entrances as well as the insides dirty. I usually have to leave my wheelchair behind and crawl into buses. I feel so embarrassed because I get dirty by the end of my trip. I have two other options; one of those two options is to wait for a "troto" which usually would not pick us (persons with disabilities in wheelchairs). So, I have to wait for a longer period of time for a driver that has the heart to accommodate me; ask the impatient passengers to wait for me to get in, take my wheelchair and store it till I arrive at my destination and give it back to me. The other option is to take a taxi which is usually very expensive, and I don't have money to patronise that service. (MD, Female, uses wheelchair; picture caption: killer: You make me dirty!!! You embarrass!!).*

*Central Cafeteria is the building where most of the University Required Classes are held because it has big capacity. When I got there the very first time, I didn't know what to do. My heart jumped. While I was waiting downstairs trying to figure out what to, some of my classmates passed by and they asked me if I wanted to go inside. When I said yes, they carried me upstairs. But after that day, I didn't go to that class again. I had to depend on my friends' notes. So, I almost failed that course; I had a very bad grade. I don't want to be carried always, like an object. It demeans me. (SM Male, uses wheelchair; picture caption: I am a person, not an object to carry!).*

Further, photovoice is flexible. The methodological modification allowed persons with mobility disabilities, especially females, who had low literacy and are more marginalised, to take part in the knowledge creation process. The importance of this assertion is noteworthy, given that they understand their issues better and can contribute to interventions to address them.

I recommend that future studies using photovoice in the global South should obtain adequate information about the study population and plan accordingly. Perceived challenges and measures to address them should be analyzed adequately. Enough time should be given for planning the entire project. Future researchers should also endeavour to motivate participants to keep the momentum because photovoice requires a lot of commitment. Non-monetary incentives, such as cameras and/or photobooks, could be considered for incentives. Building strong bonds among participants could also be helpful. Photovoice is necessary for global South research with persons with disabilities, who are more marginalized and oppressed and over-represented among the poor. Photovoice could help build their capacity for advocacy to influence policy decisions that could improve their participation and inclusion.

**ACKNOWLEDGMENTS**

The authors would like to acknowledge the funders. The statements made and views expressed are solely the responsibility of the author.

**Conflict of Interest:** None

**Source of Funding:** The project was supported by the University of Ghana Building a New Generation of Academics in Africa (BANGA-Africa) Project with funding from the Carnegie Corporation of New York [2017].

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**Table 1. SHOWed Framework, Study and Discussion Questions**

SHOWed question	Study Questions	Discussion Points
“What do you SEE here?”	Why did you take these pictures?	Discuss all possible reasons for the existence of the problem.
“What is really HAPPENING?”	Why did you take these pictures?	(1) Agree on one major/reasons/theme/ that stood out in your conversation and relate with your collective experiences (2) Discuss why this is happening?
Major adjustment, not under any SHOWed question	How do you feel about it?	Tell me how you fell about the problem in the picture.
“How does this relate to OUR lives?”	<i>Same question was asked.</i>	
“WHY does this situation, concern or strength EXIST?”	What message do you want to communicate to the public with these pictures?	(1) Discuss all possible reasons (2) Agree on one of two major(s)/reason(s)/themes/ message/s (3) Give one major message
“WHAT can we DO about it?”	What can be done to change this situation?	(1) Discuss all possible solutions and the targets (2) Give main/major solutions relating to the: Role of the family, Role of the community and Role of the state



**Table 2. Themes and Corresponding Pictures**

THEMES	PICTURES
<p><b>Surroundings of Environments</b></p> <p>Open gutters, broken sidewalks and sidewalks inhibited with obstacles and debris as well as waterlogged pathways characterised the surrounding of participant and these impacted their movement; resulted in falls and hurts and increased fatigue among study participants.</p>	
<p><b>Entrances to Buildings</b></p> <p>Entrances to building captured in the study were mainly flight of steps, stairways with no handrails, and ramps that were too steep and/or narrow as well as storey buildings with no elevators or non-functional elevators. Thus, participants were carried or crawled to access buildings which they claimed impacted their self-dignity and worth.</p>	
<p><b>Transportation</b></p> <p>Pictures captured for transportation depicted inaccessible entrances to buses and <i>trotros</i> – minibuses which compelled some persons with mobility disabilities to crawl or be carried into buses and <i>trotros</i> which exposed them to infectious diseases and falls and hurts which sometimes arise from being carried.</p>	
<p><b>Transportation Environment</b></p> <p>The lack of curb cuts to use sidewalks and absence of shelters or inaccessible shelters characterized the transportation environmental experiences of persons with mobility disabilities. They were exposed unfavorable weather conditions such as rain or extreme heat from sunlight.</p>	

Appendix 1. Picture Environment		
Code	General Environment	Specific areas
E01	Homes/Apartments and its environment	<ol style="list-style-type: none"> <li>1. Entrances</li> <li>2. Bathrooms</li> <li>3. Toilets</li> <li>4. Taps</li> <li>5. Floors</li> <li>6. Landlords' houses</li> <li>7. Space within the house/common areas</li> <li>8. Pathways/walkways</li> </ol>
E02	Transportation and its environment	<p><b>Transportation</b></p> <ol style="list-style-type: none"> <li>1. Public and church buses</li> <li>2. Trotros</li> <li>3. Taxi</li> <li>4. Inside of buses and trotros</li> </ol> <p><b>Bus Stops</b></p> <ol style="list-style-type: none"> <li>1. Pavements</li> <li>2. Shelters</li> <li>3. Bus/trotro stop locations</li> <li>4. Handicapped parking</li> </ol>
E03	Office and workplaces	<ol style="list-style-type: none"> <li>1. Entrances</li> <li>2. Inside</li> </ol>
E04	School environment	<p><b>Basic schools</b></p> <ol style="list-style-type: none"> <li>1. Entrances</li> </ol> <p><b>Tertiary schools</b></p> <ol style="list-style-type: none"> <li>2. Lecture theatres</li> <li>3. Bathrooms</li> <li>4. Toilets</li> <li>5. Libraries</li> <li>6. Registry</li> <li>7. Halls of residence</li> </ol>
E05	Bank environment	<ol style="list-style-type: none"> <li>1. Buildings</li> <li>2. Entrances</li> <li>3. ATM machines</li> </ol>
E06	Church environment	<ol style="list-style-type: none"> <li>1. Entrances</li> <li>2. Inside</li> <li>3. Chorister sitting areas</li> <li>4. Platform</li> <li>5. Washrooms</li> </ol>
E07	Hospital environment	<ol style="list-style-type: none"> <li>1. Entrances</li> </ol>
E08	Entertainment and Events	<ol style="list-style-type: none"> <li>2. Nightclubs</li> <li>3. Stadium</li> <li>4. Stage for performances</li> </ol>
E09	Business environment	<ol style="list-style-type: none"> <li>1. Restaurants and roadside food vendors</li> <li>2. Salons</li> <li>3. Shopping malls</li> <li>4. Phone repair shops</li> <li>5. Internet cafes</li> <li>6. Wedding receptions events</li> <li>7. Funerals events</li> </ol>
E10	Street crossing and traffic lights	<ol style="list-style-type: none"> <li>1. Traffic lights</li> <li>2. Pedestrian crossing</li> <li>3. Flyovers</li> </ol>
E11	Gutters and open drainage	<ol style="list-style-type: none"> <li>1. Gutters</li> <li>2. Open drainages</li> <li>3. Split mental covers</li> </ol>
E12	Pavements	<ol style="list-style-type: none"> <li>1. Pavements with impediments</li> </ol>

Appendix 2. Physical and Transportation Barriers		
Code	General Barriers	Specific Barriers
B01	Inaccessible pathways/walkways	<ol style="list-style-type: none"> <li>1. Muddy</li> <li>2. Rocky</li> <li>3. Hilly</li> <li>4. Having potholes</li> <li>5. Sandy</li> <li>6. Waterlogged</li> </ol>
B02	Inaccessible bus stops	<ol style="list-style-type: none"> <li>1. No curb-cuts to pavements at the stops</li> <li>2. No access to shelters</li> <li>3. No seats in shelters</li> <li>4. Holes around bus stops</li> </ol>
B03	Inaccessible vehicles	<ol style="list-style-type: none"> <li>1. Inaccessible entrances to vehicles</li> <li>2. Crowded aisles inside buses and <i>trotros</i></li> <li>3. Seating areas without enough space</li> <li>4. Payment of extra transport fares for wheelchairs</li> <li>5. Bus and <i>trotro</i> drivers unwilling to pick wheelchair users</li> </ol>
B04	Street crossing and traffic lights	<ol style="list-style-type: none"> <li>1. Short-programmed time for traffic lights</li> <li>2. Impatient drivers honking instead of yielding for pedestrians to cross</li> <li>3. Traffic light walkways crowded with pedestrians and luggage</li> </ol>
B05	Steps	<ol style="list-style-type: none"> <li>1. Smooth and slippery tiles</li> <li>2. Steep steps</li> <li>3. Narrow steps</li> <li>4. Steps that are too wide</li> </ol>
B06	Staircases/stairways	<ol style="list-style-type: none"> <li>1. Steps with “covers”</li> <li>2. Steps with smooth and slippery tiles</li> <li>3. Steps with no handrails</li> </ol>
B07	Pavements	<ol style="list-style-type: none"> <li>1. Absence of pavements</li> <li>2. Broken pavements</li> <li>3. Pavements inhibited with obstacles like poles, potholes</li> <li>4. Rough pavements</li> <li>5. No curb-cuts</li> <li>6. With open gutters</li> <li>7. Uneven pavements</li> <li>8. Non-terminal pavements</li> </ol>
B08	Ramps and elevators	<ol style="list-style-type: none"> <li>1. Absence of ramps</li> <li>2. Lack of elevators</li> <li>3. Broken elevators</li> <li>4. Steep ramps</li> <li>5. Ramps without handrails</li> <li>6. Narrow ramps</li> <li>7. Ramps with smooth tiles</li> <li>8. Ramps infested with air conditioners</li> <li>9. Ramps that end with obstacles</li> </ol>
B09	Smooth and slippery tiles	In most buildings including homes, apartments, public places, shopping areas, churches, salons, bathrooms and toilets
B10	Narrow doors	<ol style="list-style-type: none"> <li>1. To bathrooms</li> <li>2. To Toilets</li> </ol>
B11	Drainage	<ol style="list-style-type: none"> <li>1. Open gutters</li> <li>2. Split metal covers</li> <li>3. Open drainage holes</li> <li>4. Semi covered drainage holes</li> </ol>
B12	Inaccessible flyovers	<ol style="list-style-type: none"> <li>1. Staircases with no hand ramps</li> <li>2. Steep ramps</li> </ol>
B13	Accessible entrances locked up	