

Engaging Appreciative Inquiry in Exploring Accessibility Needs among Vulnerable Community in Kuala Lumpur Neighbourhood

Norafida Ab Ghafar¹, Mastura Adam^{1*}, Goh Hong Ching², Ahmed Abubakar³, Ammar Al-Sharaa¹

¹Department of Architecture, Faculty of Built Environment Universiti Malaya, 50603, Kuala Lumpur, Malaysia

²Department of Urban & Regional Planning, Faculty of Built Environment Universiti Malaya, 50603, Kuala Lumpur, Malaysia

³Department of Architecture, Kano University of Science and Technology, Wudil P.M.B. 3242 Kano, Nigeria

Corresponding author: mastura@um.edu.my

Published: 31st December 2022

Neighborhood accessibility affects a wider range of people, especially the vulnerable groups. The disablement of the built environment imposes limitation for the vulnerable groups to reach facilities and services independently. The built environment can only be effective when it is interconnected and seamless. Research in the past focuses on problem base approach which had little success in eliciting responses from stakeholders for sustainable change in their built environment. This research investigates accessibility experience in the built environment through social process of meaning-making based on positive and constructive interactions. This qualitative research using focus group discussion (FGD) employs an appreciative inquiry (AI) to collect and decode data in four stages; discovery, dream, design, and destiny. The FGD involved stakeholders including vulnerable communities; the elderly, pregnant women, mothers with toddlers, persons with disabilities (PwD), academicians and NGOs. Findings revealed collective priorities related to the accessibility improvements in the external and internal living environment, the need to enforce national disability law, the actualisation blueprint of the desired future living environment. To create an accessible and sustainable neighbourhood in Kuala Lumpur, the study demonstrated how the Appreciative Inquiry approach generates real community needs and voices those rights holistically.

Keywords: Accessibility Needs; Appreciative Inquiry; Universal Design; Vulnerable Community; Accessible Neighbourhood.

1. INTRODUCTION

The need to achieve inclusive development appears at the forefront agenda. Thus, the United Nations (UN) underscores the importance of intervention in enhancing access and interaction with the built environment as never before (UN CRPD, 2006). This demand is becoming more popular, given the growing evidence of a lack of adequate accessibility provision to the built environment for the vulnerable population, including PwD (Ahmed, Awad, & Yaacob, 2014), amidst inclusive policies and guidelines. Consequently, the Malaysian government is more mindful of its primary duty of championing the course of a caring society in its drive to attain a developed status (Jayasooria, Krishnan, & Ooi, 1997). Several studies to improve accessibility satisfaction and legislative provisions in the Malaysian context have garnered attention in recent years (Ahmed, et al., 2014; Dawal et al., 2016; Hussain & Tukiman, 2015; Tan, 2015; Wilson & Khoo, 2013).

Enacting policy about access and accessibility at the theoretical level is not sufficient to guarantee application at the practical level (Mahyuni, 2008), yet, adherence to the law is not compulsory in the Malaysian context **Error! Reference source not found.** The application of universal design principles in public buildings is fundamentally essential for participating and promoting engagement in meaningful occupations in the work of life (Larkin, Hitch, Watchorn, & Ang, 2015). Malaysian's adoption of right-based legislation reflects her commitment to such provisions. Researchers and practitioners need to identify ways to employ person-centred care, to fill this gap.

To enrich our understanding of architectural accessibility in the built environments, architects and planners highlighted the need for relevant and practical knowledge derived from disability experience (Heylighen, Van Doren, & Vermeersch, 2013), in addition to the response of universal design (UD) principles (Abubakar, Adam, & Ghafar, 2016). Yet, methods of eliciting data from the vulnerable population such as the elderly, wheelchair and crutches users, mothers with a toddler, and PwD are

paths not strewn with flowers. The desire to elicit data from the vulnerable population using research strategies emphasising negative experiences is typical of the earlier studies. Previous research has therefore concentrated on the generation of data from (a) "problem or dissatisfaction" experienced by PwD in their interaction with the built environment (Dawal, et al., 2016) or (b) problems related to the unavailability and inaccessibility of services to persons with disabilities (Tan, 2015), (c) barriers faced by PwD in accessing the environment of higher institutions (Ahmed, 2017; Hussain & Tukiman, 2015), or (d) determining the experience of discrimination by asking whether PwD faced a sort of difficulties or experienced some discrimination (Abubakar, et al., 2016; Khoo, Tiun, & Lee, 2013).

Many PwD are unhappy with the research strategy adopted in disability research and question its viability, correctness, and applicability in the lives of PwD (Kitchin, 2000). To this end, the "researcher-oriented" agenda that often portrays PwD as "victims of research" is academic ally abusive (Barnes & Mercer, 1997; Kitchin, 2000), devoid of positive values in the lives of PwD. Conversely, a long time ago, Cooperrider, Whitney, & Stravros, (2003) questioned the wisdom behind the scientific obsession with the behaviour of a problem-solving mentality mind-set, then offered a different viewpoint based on the optimistic disposition of appreciative inquiry (Cooperrider, Whitney, & Stavros, 2003).

Today, appreciative inquiry (AI) provides a novel concept for identifying what is effective and building upon it without using coercive techniques (Crick & Crick, 2016; Lundgren & Jansson, 2016; Pill, 2016; Scerri, Innes, & Scerri, 2015; Watkins, Dewar, & Kennedy, 2016). Interestingly absent are data focusing on the positive sides of the human experience of the vulnerable population in the Malaysian context. Another limitation of past research approaches is the issue of dignity, respect, and participants' trust (Barton, 2005). Consequently, historically, the offensive "*mechanism of silencing*" (Hook, 1989 p.16) and censoring silence the voice of PwD (Barton, 2005).

Our study deviates from the typical previous studies emphasising the participant’s vulnerability in favour of the contrary. This study focused on the positive outcomes from the participant’s interaction with the built environment. In this article, participants were encouraged to discuss what they valued and considered worthy of accessibility improvement and their positive experiences in an enabling environment.

2. LITERATURE REVIEW

2.1. Architectural accessibility

Architectural accessibility is a vital issue applicable to a broader range of people. For

example, an accessible building located in an inaccessible neighborhood is exclusionary and ineffective, which can only be effective when designers regard the built environment as interconnected such that the improvement of only one domain and not the other becomes a perpetuation of disabling practices (Ahmed, 2017). Accordingly, the United Nation convention on the rights of persons with disability (UNCRPD) stipulated the significance of intervening to eliminate barriers in both the internal and the external built environment to cater to the needs of various types of disabilities. Recognizing the existence of variations in disability types in this study, disability includes wheelchair users, sensory, ambulant, and temporary disabled. See Table 1.

Table 1: Categories and description of disability type in the study

Categories	Descriptions
Wheelchair users	People who are unable to walk, either with or without assistance and therefore use a wheelchair for mobility.
Sensory disabled	Those who experienced partial or total hearing or sight loss as a result of sensory impairments.
Ambulant disabled	People who can move with or without personal assistance or walk provided that convenient facilities such as handrails are available.
Temporarily disabled	People become disabled temporarily because of accidents or incidents, such as pregnant women and elderly persons.

Source: Ahmed et al (2016)

2.2 Universal Design in the Built Environment

Universal Design (UD), in theory, is a concept that disregards ability or lack of it and advocates for more inclusive practices at an affordable price (Iwarsson & Ståhl, 2003). Accordingly, Universal Design (UD), associated with Ronald Mace, is “a product and environment which is usable by several users to the greatest extent possible without the need for a specialized design (Abubakar, et al., 2016; Ostroff, 2001). A bottom-up approach to universal design is a strategy employed in practice and design production, with imaginary clients(s) and user(s) with varying functioning limitations and hence different accessibility requirements

(Goldsmith, 2000). Moreover, studies indicated that following a bottom-up approach to universal design at the conceptualization stage; eliminates the need for modification, adjustment, or to provide a separate provision for PwD (Holmes-Siedle, 1996). Ultimately, there is no conclusive proof that buildings designed with a top-down approach are less expensive than those conceived with a bottom-up approach to universal design (Goldsmith, 2000).

Practically, however, designers of the environment often ignore the requirements of the vulnerable population at the drawing board stage (Ahmed, 2017; Goldsmith, 2000; Imrie & Hall, 2003). Nevertheless, the national policy

on access and accessibility requires the integration of universal design at the conceptualization stage. Accordingly, designing to include the requirements of (PwD) will require the input of PwD (Abubakar, et al., 2016) because PwD are the masters of their own experience through the interaction of body and environment (Heylighen, et al., 2013).

2.3 Appreciative Inquiry

Appreciative Inquiry (AI) builds on the preceding success rather than deficit-based approaches because the more we look for problems, the more problems we find (Christie & Preskill, 2006). Appreciative Inquiry (AI) presents an invitation to believe that there is something positive in every individual or

system (Trajkovski, Schmied, Vickers, & Jackson, 2015). Thus, Appreciative Inquiry (AI) provides a positive means of exploring, discovering opportunities, and transforming organisational systems into a collective vision (Whitney & Trosten-Bloom, 2010). Thus appreciative inquiry (AI) is a social constructionist approach to research that provides a positive change (van der Haar & Hosking, 2004). Leveraging the drivers of change can unleash collective intelligence and strengthen team capacity (Hung, Lee, Au-Yeung, Kucherova, & Harrigan, 2016). Appreciative inquiry (AI) contains an unending four-d (4D) cycle; discovery, dream, destiny, and design (Ludema & Mohr, 2003). See Table 2

Table 2: Appreciative Inquiry Research Approach

Problem Solving	Appreciative Inquiry
Identify the problem	Identifying the best of what is
Analyses the cause of the problem	Envisioning “what could be”
Analysis of possible solutions	Dialogue on what should be
Action planning	Innovating what will be

Sources (Naaldenberg et al., 2015)

Appreciative inquiry (AI) is a new asset-based approach that has been generating attention for its successful application in organizational change to create a better future (Coghlan, Preskill, & Tzavaras Catsambas, 2003; Cooperrider, Stavros, & Whitney, 2008; Moriggi, 2022). It was employed in the research as it offered a theoretical and participatory framework with the potential for a progressive transformation (Ankomah, 2022; Arnold, Gordon, van Teijlingen, Way, & Mahato, 2022; Watkins, et al., 2016). At the beginning of the cycle is the discovery phase, which promotes equality-based open dialogue. Therein positive experience is revealed. The end of the cycle is marked as the destiny phase, which leads to a discovery of strength and therefore a fresh beginning. Since it only addresses positive experiences, appreciative inquiry (AI) has come under criticism for failing to address negative issues (Reason & Bradbury, 2001). This is a

mistaken view; because Appreciative Inquiry (AI) only reframes negative problems constructively into an opportunity viewpoint for improvement (Bushe, 2012).

2.4 Bridging research and practice

PwD are typically exempt from research (Barnes & Mercer, 2003). Consequently, Disability research has had little or no weight on policy nor contributed much to improving the lives of PwD because their experience is unrecognized as worthy of consideration (Barnes & Mercer, 2003; Kitchin, 2000). Thus, researchers in the disability arena are upholding the slogan “nothing about us without us” (Charlton, 1998) if only to fill the gap in the knowledge of theory and practice (Ahmed, 2017). Inclusive research is achievable through focus group discussions and interviews. Likewise, appreciative inquiry (AI) requires

recognising what is successful in the life of PwD and building upon it (Crick & Crick, 2016; Lundgren & Jansson, 2016; Pill, 2016; Scerri, et al., 2015; Watkins, et al., 2016). Bridging research and practice, therefore, requires knowledge partnership for an integrated approach and to bring it into practice (Hung et al., 2018).

2.5 Facilities and access provisions in the Malaysian public realm

The public realm encompasses the spaces used by the public, including unrestricted external and internal domains (Carmona, 2010). Consequently, the provision of accessible design in the public realm is fundamentally essential (Larkin, et al., 2015). Such a public facility should satisfy a community or groups of individuals for architectural accessibility as against the individual dwelling units. They usually provide security, safety, communication, recreation, sporting activities, health, public administration, and religious, cultural, and social benefits. Here we categorize public facilities into higher, middle, and lower-order facilities.

The higher-order public facilities are those meant to serve the entire region or metropolitan city (such as universities and general hospitals). Middle-order public facilities support some settlements. The lower-order public facilities focused on residential units, for example, crèche or pre-primary schools. The scope of our study covers middle and lower-order public facilities, specifically the high density, low-cost housing areas. The “people’s housing program” *Program Perumahan Rakyat* (PPR) is a program under the national housing department of Malaysia that provides low-cost housing at

MYR (30 - 35, 000.00). It consists of low cost multi-storey houses with 5-18 levels and a minimum floor area of 700 square feet. Each unit consists of a living room, dining, three bedrooms, a kitchen, and two bathrooms.

Malaysia has consented to the former treatment extended to PwD by signing the treaty and even ratifying same in 2010 (UN Enable, 2011). Worthy to note additionally is that the disability discrimination ordinance (DDO) enacted in 1995 prohibits discrimination and ascertained that PwD have an equal stake in accessing the built environment in totality (Chan, Lee, & Chan, 2009).

3. METHODOLOGY

3.1 Participant involvement

This study applied qualitative research using focus group discussion (FGD) technique in collecting the data. The data collected are from a day workshop conducted at Bakti Mind Building, Taman Tun Dr. Ismail Kuala Lumpur, Malaysia. The division of stakeholders consists of vulnerable groups with different disabilities namely: elderly, persons with physical disabilities, visual impairments, hearing impairments, persons with learning disabilities, parents, pregnant women and mothers with a toddler. Designers, architects, planners, researchers and authorities were also included in each group refer to figure 1. Moderators chaired the groups while the rapporteurs taking notes in the FGD workshop. A total of fifty (50) recruited participants during the data collection were equally divided into ten (10) participants in each group. The audio recorded data were then transcribed verbatim at the analysis stage.



Figure 1: Series of views during the FGD workshop.

3.2 Data Collection using Appreciative Inquiry Approach.

The utilization of appreciative inquiry (AI) allows a fair amount of time to address issues using a cyclical process consisting of a 4D cycle: the discovery stage focuses on the exploration of the community's strength, success, and experience with regard to their accessibility within the house unit design and house location relative to public community facilities in their neighbourhood. The data collection continues with the dream stage which is devoted to crafting the community's dreams and needs for the betterment of accessibility quality. At this stage, the appreciative inquiry (AI) employed positive language to elicit an answer from the stakeholders on their desired future. The design and destiny stage offers to provide suggestions for sustaining the envisioned future for an inclusive accessible neighbourhood.

Some participants in our study displayed difficulties in focusing on the positive, as most people are not use to such an approach. Thus, we give PwD participants time to reflect on what they think is right rather than wrong.

To induce a positive response, we posed four primary types of questions. The question asked at the discovery phase is for the participants to *"please tell about a place that you believed is the most accessible to you"*. Such a place could be in private or public facilities. Another question directed to the participants is to *"describe such facilities and what it has that*

makes you considered it as the most accessible of all places you experienced". The additional types of questions are tailored toward discovering PwD's dreams. The questions are crafted to evoke stories of PwD's best experiences. Thus, the participants were asked: *"What benefit do you derive in an accessible environment? What experience do you remember that attracted you to such environments?"* The third types of question utilize a bottom-up approach to universal design to obtain information on the design brief. An example of questions under this theme includes: *Considering your mobility experience in the built environment, what do you want to share with the environmental designers that you think will be of benefit to them?*

3.3 Research Design and Data Analysis using Interpretative Phenomenological Approach

The research is designed in three (3) phases refer to Figure 2. Phase 1 was conducted to elicit data using a 4D cycle of the AI Approach through social process of meaning-making based on positive and constructive stakeholder interaction. This phase allows the researcher to discover the issues and challenges based on the stakeholders' accessibility experience, desired future, and recommendations for creating inclusive accessible neighbourhood.

Phase 2 is the analysis phase using the Interpretative phenomenological approach (IPA). The Interpretative phenomenological approach (IPA) guided the analysis in three

stages. The generated data from the participants experience are then analysed using IPA (Rafique & Hunt, 2015). While IPA has been extensively used in qualitative research, the most common methods used for data collection in an IPA are audio-recorded semi-structured interviews (Smith, 2011). Notwithstanding, IPA has been utilized in a focus group discussion to discover a phenomenon from participants' lived experiences (Archer, Phillips, Montague, Bali, & Sowter, 2015).

Transcribed verbatim data from the focus group discussions uses thematic analysis following the IPA guidelines facilitated by iterative re-

examination of text (Trajkovski, et al., 2015). Three themes emerged from the data; discovering the phenomenon of strength and success, eliciting a response from the desired future, and making up a design brief at the design phase of the study.

Phase 3 is the consolidation phase which the interpretation of the findings under the four sub themes discovery (to discover the real phenomenon of accessibility in the neighbourhood), dream (envisioning a desired future), design (making up a design brief), and destiny sustaining an envisioned future).

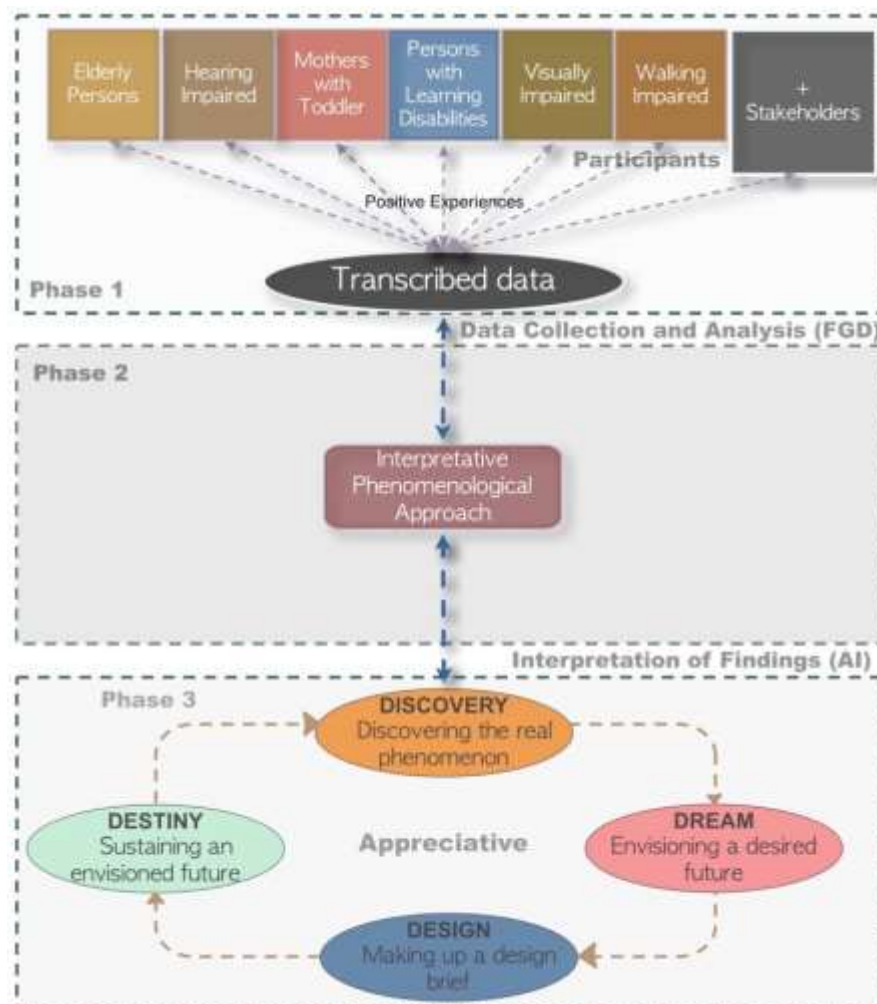


Figure 2: Research Design employed for this research

4. RESULTS AND FINDINGS

4.1 The real phenomenon of the accessible neighbourhood

While recalling the most accessible environments, we discovered that most participants live in flat and terrace houses, which serve the purpose though not as perfectly. It becomes apparent when none of the participants mentioned their residence as an example of the accessible accommodation of their dreams. It also becomes noticeable that the visually impaired, wheelchair users, and the elderly suffer more disadvantages through architectural design as more negative feedback emerged from the collection of their experiences.

4.2 Space layout in accommodation

Space layout and adequacy offer a more positive response from PwD. For example, wheelchair users recalled a positive experience when they found a spacious toilet at the FGD workshop venue that contrasts with what they have at home. The same goes for the elderly. Their preference is for the spaciousness of living spaces. They also prefer to have all the items as close to them as possible. Thus, there is a need for a more spacious space for the elderly.

4.3 Accessibility and connectivity from home to destination

Most PwD indicated the existence of inaccessible routes from where their houses are located in the external environments or lifts (for flat houses), or corridors in the (terrace houses). A case in point is the recollection of a visually impaired participant who recounted that:

“it is so difficult to access, as there is no tactile along the way from my house to commercial areas”.

Similarly, another visually impaired participant living in low-income high-rise council housing said:

“we are depending on Braille and audio to differentiate levels while using a lift however not all council housing is equipped with these communication aids”.

In other cases, where a lift is provided, it is not always equipped with visual indicators for the hearing impaired participants. As such, the hearing impaired may be faced with the fear of becoming stuck in the lift as they unable to seek help through communication devices. Again, the size of the lift is regarded as inappropriate for a stroller with two children because of its limited space.

Public transport often provides the best option to cater to the inclusive needs of PwD. However, PwD residing in the low-income high-rise become disoriented in getting to the public transportation stop. The streets in their neighbourhood posing a lot of barriers such as uncontrolled car parking along the street, cluttered pathways and lacking of crossing devices. The disablement of external built environment creates difficulties to the PwD in managing their movement independently. A visually impaired participant recalled that he always chooses to ask his daughter to drive him:

“because of the many obstacles once I stepped out of the house before I reach the bus stop. Tactile guides are completely absent in the area.”

Similarly, wheelchair users become disadvantaged by the absence of pathway connectivity from the high-rise housing to the nearest LRT station or bus stop.



Figure 1:(a) Misused PWDs’ parking and motorcycles are parked along the corridor, (b)No ramp is provided leading to facilities (c) Ramp is provided at the clinic entrance with street furniture (d)the reception counter.

Physical impaired participants stated that:

“I prefer to drive my car instead of using motorized wheelchair to the bus stop because it takes me about 15 minutes to wheel to reach the train station because the road is overcrowded and dangerous. However, there is always a problem with parking spaces at the train station which is narrow and misused or mostly occupied by non-disabled users”

Hearing impaired participants commented that:

“Between Light Rail-Transit (LRT), taxi and bus, I would prefer LRT because most of the taxi charges are expensive and LRT is more secure and safe than bus transportation. By the way, majority of cars will park at the bus stop making them inconvenient for use”

Visual impaired participants stated that:

Based on my situation, I will choose to rent a house nearby for easy access to public transport. But whenever we are moving to

a new place (rent house), we become concerned on our safety, for example, like having a new padlock on the door, changing my room door lock, or even having security alarm in the house”.

4.4 Disabling experiences in public amenities

Community facilities such as mosques (or *Surau*), kindergartens, police stations, community halls, and clinics are supposed to be located close to PwD residence for easy access. Findings revealed that PwD have to endure the hardship of walking about 20 minutes to reach the nearest *surau*, and *“it is quite challenging”* according to a visually impaired participant.

Another visual impaired participant added:

“I live in a terrace house nearby Wangsa Maju where the surau is located on the hill. The surau is far... I have to walk to the surau with poor accessibility. There is no tactile to guide me to the surau. I think maybe because blind people is minority in

this area that is why they don't provide the facilities."

As for another visually impaired participant shared a similar disabling experience related to connectivity to public facilities in his neighbourhood as

"I had to take a cab to the mosque because there are many barriers confronting me along the way if I walk to the mosque".

Hearing impaired participants emphasises on the access for information in the mosque:

"In my situation, I would prefer to go to Shah Alam, Kelana Jaya, and PJ mosques because the majority of the mosques there are provided with such facilities like LCD, which is suitable for the deaf people."

Another hearing-impaired participant was asked about their best experiences while using the mosque. It is found that visual and audio devices are also contributing to the creation of disabling condition for the PwD. The participants shared his positive experiences and feeling of being inclusive as stated below:

"I prefer to go to a mosque which provides LCD projectors where the Friday sermon is projected on the screen so that I can follow through. Unfortunately, not all mosques nearby were equipped with LCDs"

While a wheelchair user attributed his preference in selecting mosque facility to the availability of ramps. He described about the provision of ramps and pathways at the nearest mosque in his neighbourhood which is not fully accessible to a wheelchair user due to a long pathway to get to the mosque and steep ramp gradient at the mosque entrance as shown in Figure 3b.

An elderly woman stated that her preference for selecting a mosque is depending on the availability of a women's praying area on the ground floor in which it is commonly located on the upper floor. Participant unwilling to climb the staircases to reach the women's praying area as said;

"I have joint pains... it is really hurting me. This has discouraged me to pray in the mosque and make me secluded from my friends and neighbours".

When asked what are other needed facilities in their neighbourhood, participants considered the clinic to be one of the most important public facilities for their inclusive neighbourhood. While recounting a positive experience, participants highlighted the importance of locating the clinic within a walking distance and close proximity to their residential areas.

For the hearing-impaired participant, their concern is not mainly on the close proximity, but it is about clinic operation and services in particular to the way how clinic staff calling out patients' name for doctor's consultation. The clinic lack of visual display devices for that purpose specifically for this vulnerable group.

Hearing-impaired participant has this to say:

"I always use my phone to communicate with the person in charge at the counter... the clinic staff can write on the screen of my phone. It is too bad because there is no visual display on the wall".

Physical impaired participant emphasised on issues related to the external environment surrounding the clinic facilities:

"Most community facilities are not within reach in our residential areas. Besides, the clinic is quite far ...road curbs is too high and create difficulties for my wheelchair to access the pedestrian pavement. Furthermore, the surface is uneven and there is also with steps which makes it harder for me to wheel".

Crutches users also pointed the important of providing grab bar and railing as they stated:

"it is important to hold on it however it is not provided in the clinic".

As for wheelchair users to enjoy equal treatment in the clinic, lowering the counter to suit their height is a good solution as shown in Figure 3d.

Another physical impaired participant highlighted on the accessibility policy as;

“we have the law... I mean the person with disability Act 2008... if only it is practiced then accessibility problems will be over. We are made disabled not so much by our impairment, but when our accessibility requirements are ignored”

In overall, the participants shared their positive and negative experiences with regards to

accessibility issues and challenges they faced in their neighbourhood. This valuable feedback made able to consolidate the accessible needs among the vulnerable community.

5. DISCUSSION

Based on the results, the accessibility issues in public community facilities can be categorised into three domains, namely management or operation, policy or regulation, and design (Figure 4).

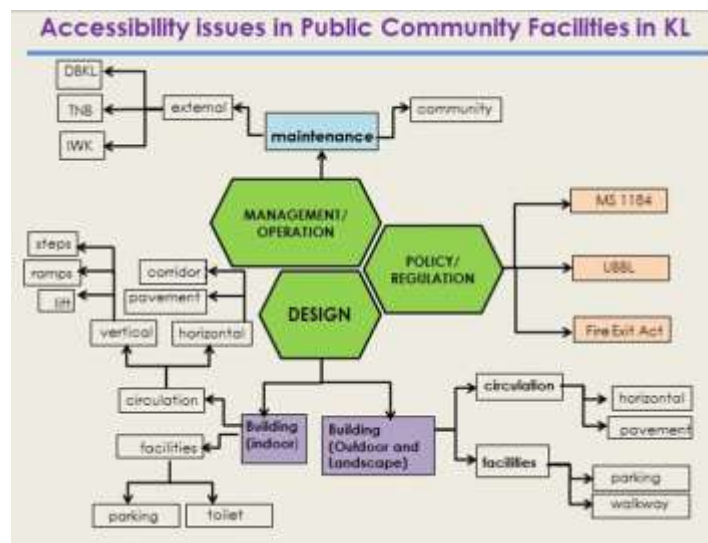


Figure 4: Three domains emerged from the study.

The management process deals with the maintenance procedure, which focuses on the community sectors and external sectors. The external sectors are linked to local authorities such as Kuala Lumpur City Hall (DBKL), Tenaga Nasional Berhad (TNB), and Indah Water Konsortium (IWK). Meanwhile, the policy or regulation relates to Malaysian Standard MS1184: 2014, Universal design and accessibility in the built environment - Code of practice, Malaysian Uniform Building By Law (UBBL) and Fire Services Act 1988.

In terms of design, these factors can be broadly divided into two parts: the internal environment (indoor building) and the external environment (outdoor building and landscape). Both environments are designed based on the appropriate circulation and facilities in making the building accessible. In the indoor building, the circulation is divided into vertical circulation (e.g., steps, ramps, lift) and

horizontal circulation (e.g., corridor, pavement); while the facilities focus on the parking lot and toilet area. Simultaneously, outdoor building for circulation is concentrated on the horizontal and the pavement areas, while the facilities encompass the parking areas and the walkways.

The analysis results which are arranged into four themes, namely the phenomenon of the accessible neighbourhood, space layout in accommodation units, accessibility and connectivity from home to destination, and experiences in public amenities can be further discussed using the Appreciative Inquiry approach in the following sections.

5.1 The discovery phase

During the discovery phase, most participants lived in PPR and terrace houses, which are low cost. Descriptions of the

participant's residential spaces indicated narrow spaces, probably because the area is low-cost. Thus, the majority of the participants, including wheelchair users, the visually impaired, the elderly, and mothers with strollers of two are constrained by limited spaces. The problems of inadequate spaces are compounded when connectivity is not provided between residential spaces and bus stops or public facilities. Often connectivity is superficially provided, but they are either misused or ill-equipped as depicted in figure 3a. These make PwD's experiences more difficult when associated with the built environment. PwD often take an alternative way to reach their destination and overcome the problem associated with inaccessible pathways through the use of public facilities (Ahmed, 2017). Their problem becomes anew when the public facility they visit is ill-equipped to cater to their inclusive needs. Consequently, PwD become restricted to the use of privately owned vehicles as recounted by the participants. In this case, persons with disabilities may not be part of the global movement toward reducing carbon footprint and decreasing sedentary lifestyles.

In addition to the planning factors, the architectural exclusion is also discovered. For example, our findings indicated that Suraus are often alienating to PwD, especially elderly women and women with disabilities when their prayer room is located on the upper floor and a steep staircase becomes the only available route to access it. Unfortunately, this is observed in most Suraus. Similarly, the clinic presents a formidable barrier to PwD when the counter at the reception is unnecessarily high for a wheelchair user to reach.

Inadequate facilities and services also can be a source of exclusion for PwD. The hearing impaired stated that they become disadvantaged when the clinic uses a manual system to call the patient's name.

5.2 The dream phase

Envisioning what could be the participant's dream we sought the participants to elaborate on their experiences (dream phase) rather than the facilities (discovery phase). Thus, participants were asked to describe the benefit

they envisioned when the environment is made accessible to them. Their wish list is explained in what follows, providing for disabled persons means providing for all. If the environment is made accessible to a wheelchair user, a mother with a stroller will also benefit, and so also is a traveller with heavy luggage. Likewise, visual displays of information may help to communicate with the hearing impaired. It will also be beneficial to a traveller who may not have understood the secondary language spoken, but by the visual signs of communication as well because they are universal. Whatever benefits the visually impaired will also benefit the partially sighted. In a nutshell, whatever benefits some disabled-bodied persons will indirectly benefit society at large (Goldsmith, 2000), because we will have an increase in human resources or a decrease in human dependency.

Findings from this study, therefore, are confirming the assertion that the right-based legislation, which is meant to be practiced fully, is not practiced in totality in the Malaysian context. For the enforcement of such Acts, therefore, PwD and stakeholders as well as the government need to close rank and ensure better public transportation, facilities, amenities, and services as contained in the Persons With Disabilities Acts 2008 (Kadir & Jamaludin, 2012).

5.3 The design phase

In the design phase, we considered the mobility experience of PwD as important and therefore demanded their input on what they may want to share with environmental designers or what they think will be of benefit to everyone from their experience. Findings from this approach are tailored towards a recommendation similar to a bottom-up approach to universal design. The participants believed that architects and planners, as well as the community at large, can design the environment to make it appealing to them by including some useful features and excluding some obstacles. The visually impaired, for example, described their accommodation as not capacious enough, only 700 square feet. It even becomes narrower when the furniture is included. This causes a lot of difficulties to move around. Besides, tactile

pavements are not readily available to guarantee to PwD in the law. Wheelchair users also become disadvantaged by narrow spaces such as inaccessible toilets.

6. CONCLUSION

This study concentrated on the constructive possibilities from the experience of PwD in their interaction with the built environment. In this article, PwD were invited to talk about what they valued and considered worthy of accessibility improvement in their interaction with the built environment. Constructive possibilities emerged from the inquiry carried out by the authors. This gives way to the following broad recommendations to provide empirical evidence and stimulate action on the part of the government and also other stakeholders in the society.

Firstly, the participant reiterated the importance of enforcing right-based legislation for PwD, as stipulated in the persons with disabilities Acts 2008. It stipulated the provision of better facilities and services for PwD accessibility wise. While the legal provision presents, its implementation through strategies and programs need to be fine-tuned at the local level with meaningful engagement with all the relevant stakeholders become critical. Apart from that, the design of the external and internal environment should comply to MS1184:2014, UBBL and Fire Services Act to ensure the Accessible Neighbourhood is achieved.

Secondly, there is a need to provide some better transport facilities, amenities, and services, better health care, information and technology, employment opportunities, as well as improved access to cultural life and activities as contained in the national policy. Enforcement by the authorities is crucially needed to ensure that the facilities and services are not misused or abused.

Thirdly, building types to which priority is required by PwD include clinics, and shopping centres, surau, and residential spaces especially, the low-cost housing units. Thus, there is a need for urgent improvement. This is because evidence indicated that low-cost houses are more prone to inadequate space dispositions

and public facility provisions are not always located in their proximity;

Fourthly, communication, education and public awareness need to be improved. While the call for inclusive planning is on the rise, the existing awareness level to truly appreciate universal design may not be on par due to various interests which are often conflicting among the stakeholders involved as the facility providers in the built environment. Educating the public and environmental designers that whatever is good for PwD is equally good for everyone. After all, PwD are normal people with impairment and ability. To borrow the words of a participant “we are made disabled not so much by our impairment, but when our accessibility requirements are ignored”.

Fifthly, Appreciative Inquiry is an action research-based approach that promotes broad stakeholder’s engagement and involvement in creating a shared community vision that is unique in generating positive development for change and resilient built environment. This approach built a mutual and in-depth understanding through hearing about the community real experiences and their constructive meaning of accessible neighbourhood.

7. ACKNOWLEDGMENT

This research was funded by the Fundamental Research Grant Scheme project number GC001B-14SUS under Sustainability Science (SuSci) Research Cluster University of Malaya.

8. REFERENCES

1. Abubakar, A., Adam, M., & Ghafar, N. (2016). Response of universal design to the mobility experience of disabled people in tertiary institutions of North West Nigeria. *Journal of Universal Design in the Built Environment*, 2(2), 1-15.
2. Ahmed, A. (2017). *Overcoming barriers to inclusive mobility: Experience of disabled people in Tertiary Institutions of Kano*,

- Nigeria/Ahmed Abubakar. University of Malaya.
3. Ahmed, A., Awad, Z. A. C. M., & Yaacob, N. M. (2014). The response of accessibility infrastructures for PWD to national disability policies in higher institutions of developing countries: Case study of Ahmadu Bello University, Zaria and University of Malaya, Kuala Lumpur. *Journal of Surveying, Construction and Property*, 5(1), 1-16.
 4. Ankomah, W. S. (2022). Positive Experiences, Dreams, and Expectations of International Master's Students at a Southern Ontario University: An Appreciative Inquiry.
 5. Archer, S., Phillips, E., Montague, J., Bali, A., & Sowter, H. (2015). "I'm 100% for it! I'm a convert!": Women's experiences of a yoga programme during treatment for gynaecological cancer; an interpretative phenomenological analysis. *Complementary Therapies in Medicine*, 23(1), 55-62. doi: 10.1016/j.ctim.2014.12.003
 6. Arnold, R., Gordon, C., van Teijlingen, E., Way, S., & Mahato, P. (2022). Why use Appreciative Inquiry? Lessons learned during COVID-19 in a UK maternity service. *European Journal of Midwifery*, 6.
 7. Barnes, C., & Mercer, G. (1997). Breaking the mould? An introduction to doing disability research. *Doing disability research*, 1, 1-4.
 8. Barnes, C., & Mercer, G. (2003). *Disability*: Polity Press Cambridge.
 9. Barton, L. (2005). Emancipatory research and disabled people: Some observations and questions. *Educational review*, 57(3), 317-327.
 10. Bushe, G. R. (2012). Appreciative Inquiry: theory and practice *The Routledge companion to organizational change* (pp. 101-117): Routledge.
 11. Carmona, M. (2010). *Public places, urban spaces: the dimensions of urban design*: Routledge.
 12. Chan, E. H. W., Lee, G. K. L., & Chan, A. T. S. (2009). Universal design for people with disabilities: A study of access provisions in public housing estates. *Property Management*, 27(2), 138-146. doi: Retrieved from <http://doi.org/10.1108/02637470910946435>
 13. Charlton, J. I. (1998). Nothing about us without us *Nothing About Us Without Us*: University of California Press.
 14. Christie, C. A., & Preskill, H. (2006). Appreciative inquiry as a method for evaluation - An interview with Hallie Preskill. [Editorial Material]. *American Journal of Evaluation*, 27(4), 466-474. doi: 10.1177/1098214006294402
 15. Coghlan, A. T., Preskill, H., & Tzavaras Catsambas, T. (2003). An overview of appreciative inquiry in evaluation. *New directions for evaluation*, 2003(100), 5-22.
 16. Cooperrider, D. L., Stavros, J. M., & Whitney, D. (2008). *The appreciative inquiry handbook: For leaders of change*: Berrett-Koehler Publishers.
 17. Cooperrider, D. L., Whitney, D. K., & Stavros, J. M. (2003). *Appreciative inquiry handbook* (Vol. 1): Berrett-Koehler Publishers.
 18. Crick, D., & Crick, J. (2016). An appreciative inquiry into the first export order. [Article]. *Qualitative Market Research*, 19(1), 84-100. doi: 10.1108/qmr-01-2015-0001

19. Dawal, S. Z., Mahadi, W. N. L., Mubin, M., Daruis, D. D. I., Mohamaddan, S., Razak, F. A. A., et al. (2016). Wudu Workstation Design for Elderly and Disabled People in Malaysia's Mosques. *Iranian Journal of Public Health*, 45(1), 114.
20. Goldsmith, S. (2000). *Universal design: A Manual of Practical Guide for Architect*. Oxford UK,: Routledge.
21. Heylighen, A., Van Doren, C., & Vermeersch, P.-W. (2013). Enriching our understanding of architecture through disability experience. *Open House International*.
22. Holmes-Siedle, J. (1996). *Barrier-free design: a manual for building designers and managers*: Routledge.
23. Hung, L., Lee, P. A., Au-Yeung, A. T., Kucherova, I., & Harrigan, M. (2016). Adopting a clinical assessment framework in older adult mental health. *Journal of Psychosocial Nursing and Mental Health Services*, 54(7), 26-31.
24. Hung, L., Phinney, A., Chaudhury, H., Rodney, P., Tabamo, J., & Bohl, D. (2018). Appreciative inquiry: Bridging research and practice in a hospital setting. *International Journal of Qualitative Methods*, 17(1), 1609406918769444.
25. Hussain, M. R. M., & Tukiman, I. (2015). Landscape Environment for Student with Disabilities (SwDs) in the International Islamic University Malaysia (IIUM) Main Campus. *Advanced Science Letters*, 21(6), 2058-2062.
26. Imrie, R., & Hall, P. (2003). *Inclusive design: designing and developing accessible environments*: Taylor & Francis.
27. Iwarsson, S., & Ståhl, A. (2003). Accessibility, usability and universal design—positioning and definition of concepts describing person-environment relationships. *Disability and rehabilitation*, 25(2), 57-66.
28. Jayasooria, D., Krishnan, B., & Ooi, G. (1997). Disabled people in a newly industrialising economy: opportunities and challenges in Malaysia. *Disability & Society*, 12(3), 455-463.
29. Kadir, S. A., & Jamaludin, M. (2012). Applicability of Malaysian standards and universal design in public buildings in Putrajaya. *Procedia-Social and Behavioral Sciences*, 36, 659-669.
30. Khoo, S. L., Tiun, L. T., & Lee, L. W. (2013). Unseen Challenges, Unheard Voices, Unspoken Desires: Experiences of Employment by Malaysians with Physical Disabilities. *Majian Malaysia*, 31, 37-55.
31. Kitchin, R. (2000). The researched opinions on research: Disabled people and disability research. *Disability & Society*, 15(1), 25-47.
32. Larkin, H., Hitch, D., Watchorn, V., & Ang, S. (2015). Working with Policy and Regulatory Factors to Implement Universal Design in the Built Environment: The Australian Experience. *International Journal of Environmental Research and Public Health*, 12(7), 8157-8171. doi: 10.3390/ijerph120708157
33. Ludema, J., & Mohr, B. (2003). *The appreciative inquiry summit: A practitioner's guide for leading large-group change*: Berrett-Koehler Publishers.
34. Lundgren, M., & Jansson, H. (2016). Developing international business knowledge through an appreciative inquiry learning network: Proposing a methodology for collaborative research. [Article]. *International*

- Business Review*, 25(1), 346-355. doi: 10.1016/j.ibusrev.2015.06.004
35. Mahyuni, E. (2008). Disabled Community Led Down by Authorities' Lack of Will, Poor Coordination: Komunitikini.
 36. Moriggi, A. (2022). An Ethos and Practice of Appreciation for Transformative Research: Appreciative Inquiry, Care Ethics, and Creative Methods *Co-Creativity and Engaged Scholarship* (pp. 131-164): Palgrave Macmillan, Cham.
 37. Naaldenberg, J., Banks, R., Lennox, N., Ouellette-Kunz, H., Meijer, M., & Lantman-de Valk, H. v. S. (2015). Health inequity in people with intellectual disabilities: from evidence to action applying an appreciative inquiry approach. *Journal of Applied Research in Intellectual Disabilities*, 28(1), 3-11.
 38. Ostroff, E. (2001). Universal design: the new paradigm. *Universal Design Handbook*, McGraw-Hill, New York, USA.
 39. Pill, S. (2016). An appreciative inquiry exploring game sense teaching in physical education. [Article]. *Sport Education and Society*, 21(2), 279-297. doi: 10.1080/13573322.2014.912624
 40. Rafique, R., & Hunt, N. (2015). Experiences and coping behaviours of adolescents in Pakistan with alopecia areata: An interpretative phenomenological analysis. *International Journal of Qualitative Studies on Health and Well-Being*, 10. doi: 10.3402/qhw.v10.26039
 41. Reason, P., & Bradbury, H. (2001). *Handbook of action research: Participative inquiry and practice*: sage.
 42. Scerri, A., Innes, A., & Scerri, C. (2015). Discovering what works well: exploring quality dementia care in hospital wards using an appreciative inquiry approach. [Article]. *Journal of Clinical Nursing*, 24(13-14), 1916-1925. doi: 10.1111/jocn.12822
 43. Smith, J. A. (2011). Evaluating the contribution of interpretative phenomenological analysis. *Health Psychology Review*, 5(1), 9-27. doi: 10.1080/17437199.2010.510659
 44. Tan, S. H. (2015). Unmet Health Care Service Needs of Children With Disabilities in Penang, Malaysia. *Asia-Pacific Journal of Public Health*, 1010539515592461.
 45. Trajkovski, S., Schmied, V., Vickers, M., & Jackson, D. (2015). Using appreciative inquiry to bring neonatal nurses and parents together to enhance family-centred care A collaborative workshop. *Journal of Child Health Care*, 19(2), 239-253.
 46. UN CRPD. (2006). United Nations. Convention on the rights of persons with disabilities and optional protocol. *New York: United Nations*.
 47. UN Enable. (2011). Convention and optional protocol signatures and ratifications.
 48. van der Haar, D., & Hosking, D. M. (2004). Evaluating appreciative inquiry: A relational constructionist perspective. *Human Relations*, 57(8), 1017-1036. doi: 10.1177/0018726704045839
 49. Watkins, S., Dewar, B., & Kennedy, C. (2016). Appreciative Inquiry as an intervention to change nursing practice in in-patient settings: An integrative review. [Review]. *International Journal of Nursing Studies*, 60, 179-190. doi: 10.1016/j.ijnurstu.2016.04.017

50. Whitney, D. D., & Trosten-Bloom, A. (2010). *The power of appreciative inquiry: A practical guide to positive change*: Berrett-Koehler Publishers.
51. Wilson, N. C., & Khoo, S. (2013). Benefits and barriers to sports participation for athletes with disabilities: the case of Malaysia. *Disability & Society*, 28(8), 1132-1145.