Evaluation of the Accessibility as a Right in Terms of Family Health Center

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Abstract: Built environment we live in indicates a chain-like structure that includes internal spaces as well as urban spaces. Use of space is a dominant human activity in the built environment because mobility necessitates a certain effort. While some of these efforts require minimum amount of effort depending on the level of disability, many situations requiring maximum by the people with disabilities take place in the inaccessible built environment. Since almost everyone will experience some kind of disability as they get older, people with disabilities will be a large and growing sector of the population by demanding various levels of health care services. However, many people with disabilities do not acquire basic health care services because of inaccessible and unusable health buildings, health care facilities and equipment needed to serve people with disabilities. The paper, evaluates Family Health Center (FHC) as a health care facility in Eskişehir in terms of accessibility and usability for people with disabilities.

Key words: Accessibility • Health building • People with disability • Family health center • Eskişehir

INTRODUCTION

While modern world which accepts mobility as a right for everyone performs actions aiming to organize all sections of community in this direction, it also re-regulates the relations with humans with their environment. This situation converts the urban area into a common living area and effects the contribution to this area and accordingly the usability of the area. The contribution and usability of the area is achieved by mobility.

Mobility expresses motion from one place to another and therefore accessibility to social relations and activities which forms and important cross section of human life quality. For this reason, mobility is described as the basic and necessary activity of people from every age regardless of social status, intellectual capability, economical status, health, age, sex, social, psychological, physical, emotional and cognitive talents [1]. All physical contributions in daily life and usage style begin and end with motion therefore movement and accessibility is assumed as the basic components of mobility.

The three concepts could be defined as follows:

- Mobility is the ease of movement from place to place and thus represents the ease with which a person can reach an activity. This consists of two elements; movement and accessibility.
- Movement is the act of moving (i.e. the physical displacement required in order to reach the activity). Sometimes the movement required to reach a facility is minimal, but in most cases there is a need to use some form of conveyance (e.g. a vehicle) to enable this displacement to occur. If it is not possible to reach and use this vehicle, the movement is impossible and the activity cannot be reached.
- Accessibility is the ability to be approached, reached or entered and in this context represents the ease of reaching and using a transport system.

In short, an easy way to think of the relationship between these three concepts is in the form of the equation: Mobility = Movement + Accessibility
Which suggests that movement and accessibility are in some way mutually exclusive. If accessibility is increased it is more than likely that movement would have to be reduced and vice versa [2].

Mobility, in some approaches, focuses on movement and accessibility based voyage, visit and travel activities depending on human motivation [3]. However there are approaches which consider mobility as relation of human beings between each other more than moving somewhere or traveling. In these approaches which extend the meaning of the concept, mobility is placed on a spatial, temporal and contextual basis [4].

Mobility is evaluated within medical model regarding the behavior theories towards disables and in disability context as a health problem while it is evaluate in social model regarding the disability status preventing participation to social and built environment [5]. Medical model which concentrates on the disorder of body functions, is also described as tragedy model as it considers the individual disability of the person as a health problem [6]. Social model is more focused on the disability status of the person in means of social and environmental aspect. Although the model includes different opinions [7] about this subject, it accepts that the full participation of people with disabilities are prevented by creating a disabled status and this results with isolation [8].

Mobility, regardless of the context it is being evaluated, necessitates a certain effort to be performed. While some of these efforts require minimum amount of effort depending on the level of disability, many situations requiring maximum by the people with disabilities take place in the inaccessible built environment. Therefore the public spaces and buildings should be accessible for all regardless they have public use or not (health, education, trade, socio-cultural, religious structures, roads, squares) In the built environment leaning from building interiors to urban exterior areas it is not generally accepted that everybody may be potentially disabled however, mobility proceeds to be an important dimension of the designed location which is becoming legally stronger and is created depending on the socio-economical, cultural and political dynamics shaping the built environment [9]. Therefore the participation right of every individual in the city to the social activities and opportunities by their own free wills, regardless what their ages, races, physical and body abilities are, is being more supported day by day. Every individual living in the urban dweller only have the opportunity to participate to daily life and develop the life activities by this way [10].

Although sometimes there opportunities are being used with minimum effort without a need for displacement, participation to built environment generally requires great effort. This effort changes according to:

- The accessibility from the starting space of the movement to transportation vehicles
- The accessibility of the transportation vehicles
- The accessibility of the location to be visited

While this effort is more limited in an accessible space, individual may perform great effort in space where accessibility can not be achieved.

Many e-accessibility based services which have become prevalent in recent years are being given in electronic environment without physical interaction and with minimum effort. However it can be seen that this effort increases in services such as health where the individual has to interact physically with the service providers. (diagnosis, treatment, etc…) There are even situations special to some geographical regions where service providers are not accessible despite of the efforts. Therefore communication opportunities such as web accessibility in fields where physical interaction is not necessary (e-education, etc…) and built environment and transportation vehicle accessibility in fields where physical interaction is necessary (health, etc…) should be achieved. Moreover, every individual living in the city has the basic right to participate all social activities and opportunities in the city with their own free wills regardless what their age, race, physical and body capabilities are.

The Accessibility of the Health Buildings and Family Health Centers (FHC): In a built environment, the relations between land usages and activities, their frequencies are parameters that should be taken into account during planning. Besides, walking distances, accessibilities and the sufficiency of their service areas according to the population are factors that should be examined [11] Health facilities are among basic equipments in locations where equipment requirement started taking place. These facilities vary such as private or official hospitals, community and family health centers, polyclinics and medical / branch centers. Family health centers are different than the other facilities as they are bound to community health centers; they are structured in neighborhoods and host family doctors. This differentiation makes family health centers the first application place for taking health services within the location where equipment requirement emerged.
In planning the equipments should be reached in 5-10 minutes by walking and the facilities should be maximum 400-800 meter far from the residences [12]. In the regulation prepared by development Plan Law No 3194 the obligation to provide accessibility and usability of equipment areas by related TS is emphasized. In the accessibility emphasis, health regulation also takes place as well as planning principles, development regulation and related standards. In regulations related with health buildings, the accessibility of the health facility is requested under the headlines of location selection; license application, physical and technical conditions and procurement of health facility. For the family health centers to give service they have to be convenient to health service types and quality, they have to satisfy the service providers and takers, fulfill the functional and structural minimum standards and be in an easy accessible location [13].

Although accessibility is only mentioned for disabled in the laws and regulation, it has to be achieved for everyone who is potentially disabled for a certain time in their life due to sickness or old age. Design tendency according to built environment is changing from special to common within time. In the last quarter of the previous century, the approaches which were described as design/accessibility for disabled are today becoming widespread as design/accessibility for all or universal design. Sustainable design approach as a new paradigm [14] and management of this process and evaluate of the best practise is widely focused to life quality [15]. Therefore the insufficiency of accessibility will limit the participation of disabled individuals to daily life and activities as well as will prevent all kinds of public services to be taken, especially health. However the achievement and development of participation to built environment is one of the priorities of daily life in means of interaction with public area as well as increasing the life quality of the disabled [16].

**Spatial Analysis and Findings:** This study takes the accessibilities of 40 Family Health Centers within Eskisehir Local Health Authority as a basis and presents the usability of family health centers by the people with disabilities by spatial analyzing them locationally. The research findings are presented in two stages: (exterior) accessibility to family health center and (interior) the accessibility and usability of family health center. Accessibility to family health center, expresses the transportation possibilities until the building entrance and the accessibility of the family health center expresses the usability of the interior functions starting from the building entrance.

**Accessibility to Family Health Centers (FHC):** Access to FHC, (external accessibility) expresses accessing to the locations subject to internal accessibility and using these locations. Therefore it reflects the relation of FHC with its surrounding and city in means of accessibility. Patients who are passive users of health buildings, can have access to the FHC’s which have been structured in scale of neighborhoods by walk or by vehicle. In transportation by walk, even the FHC’s are accessible and in a walkable distance, it is inevitable that the patients will make an effort. If the accessibility can not be achieved, this effort increases and an companion is needed. In transportation by vehicle, public transportation vehicles are important. Except private automobiles and ambulances, the usability of public transportation vehicles and bus stops are the primary conditions of accessibility for people with disabilities. The public transportation service in the city is prevalently given by municipality busses, shared taxis and trolleys. While trolley which has a limited route provides a comfortable transportation for everyone, all municipality/private busses and shared taxis are not accessible by people with disabilities.

![Fig. 4.1: Inaccessibility from bus station to FHC.](image)
The bus stops are also not accessible too. While trolley stops are easily accessible by even a wheelchair, it is not possible to talk about full accessibility in bus and shared taxi stops.

According to the location analysis, the accessibility between FHC’s and nearest bus stops are limited (19.2%). Adaptations as a result of simple interventions can increase this ratio up to 78.8%. On the other hand the ratio of bus stops that have planning and design problems that are impossible to fix is 21.2%.

Secure and accessible bus stop, waiting and parking lot are essential for accessibility to health buildings by private autos, taxi and even ambulance. It is observed that only half of the FHC’s have stopping and waiting lots however these lots do not have secure and accessible properties. In case of parking lots, only 32.5% of the FHC’s have parking lot. Parking lot-sidewalk accessibility can be achieved only in 7.6% of these parking lots. An illumination for using the external location securely is not present in 72.5% of the FHC’s while it is insufficient in the rest. An arrangement that minimizes or prevents the atmospheric effects (rain, snow, ice) is not present in any of the FHC’s. Location analysis shows that there is no parking lot in FHC’s that have a parking signboard and illumination for people with disabilities. Parking lot-sidewalk relation is not solved in any of them either.

77.5% of the FHC building entrances are not accessible from the sidewalks. This is mostly due to the level difference between sidewalk and building ground and non-standard solutions of this problem. In 10% of the FHC’s, accessibility to building entrance is only made by stairs. In 57.5% of the FHC’s, there are non-standard ramps that are not possible to use. While 10% of the FHC’s require serious changes for accessibility, 22.5% of the FHCs can become more accessible with simple interventions.

**Accessibility of the Family Health Centers (FHC):**

The accessibility of FHC’s (internal accessibility) expresses the accessibility from building entrance to internal locations (horizontally and vertically) and their means of usage. Similar to external accessibility, internal accessibility should be accessibility for all and should valid for all locations that are open to general usage. Otherwise it is not possible to talk about usability for all. Accessibility and usability analysis shows that the external problems continue inside the buildings starting from the entrance.

The accessibility problems in building scale, start at the building entrance. While sometimes there is not even a landing in front of the entrances, sometimes the entrance is located on the final step of the stairs. There are FHC’s where the landing is not wide enough and in some FHC’s, the locations in front of the entrance do not coalesce with the ramp and limit the usage due to wrong design. Landing is usable only in 47.5% of the FHC’s whose location analysis is made.

In buildings to which location analysis was made, accessibility to building exterior to building interior is only 22.5%. In the rest 77.5%, there is a level difference between building exterior and building interior and the accessibility is not provided for people with disabilities. This level difference problem was solved by only stairs in 10% of FHC’s, in 57% by stairs and non-standard ramp, in 5% by stairs and standard ramp and in 28% others. (step, threshold, etc.) Analysis shows that in only 5% of the FHC’s accessibility from building exterior to building entrance door is possible. The non-standard solutions in the rest 95% even prevent access to the building entrance from the outdoor spaces. The factors preventing accessibility to building entrance other than level difference are other structural elements such as landing, door widths and door type. In 52.5% of the FHC’s, the landing is not suitable, in 35% of the FHC’s the doors are not wide enough and in 40% of the FHC’s the doors are not accessible and usable.

The FHC entrances are generally insufficient considering that they will be used as emergency entrance when there is no other emergency entrance exists. Both horizontal and vertical circulation should also be achieved barrier free in terms of interior accessibility. The health providing buildings having...
single or multiple flats, being rented or located in a restored historical building do not remove this necessity. The researched FHC’s occupy one or more flats in buildings with various heights. Only 3 FHC’s have single flat. 37 FHC’s provide service in buildings with 2 or more flats. Therefore this shows that horizontal accessibility should be achieved in 7.5% of the FHC’s while both vertical and horizontal accessibility should be achieved in 92.5% of the FHC’s. FHC’s are generally located in ground flat or they occupy ground and first flats together. FHC’s mostly provide service in buildings with 3 flats.

According to analysis, 77.5% of the FHC’s provide service in more than one floor while 22.5% provide service in only one floor of the building. 42.5% provide service in 2 floors and 35% provide service in 3 floors in the building. 80% of the analyzed FHC’s are accessible in horizontal circulation and 20% are not accessible. In 6.45% of the multi flat FHC’s the vertical circulation is achieved by both lifts and stairs while the rest of the FHC’s (93.5%) are not accessible for all.

In FHC’s there are limited toilets for staff and patients. When the building plans of FHC’s are examined this situation is not related with design but it is related with the separation of the existing toilets due to user requirement. There are serious problems regarding accessibility to the toilets assigned to people with disabilities. Only in 20% of the FHC’s, there are toilets assigned to disabled toilets. 6 of these toilets are in any floor of the building while in 2 buildings they are in more than different floor. Although there are toilets assigned to people with disabilities in 8 FHC’s (in single or more than one flat) none of these toilets are usable as they do not comply with accessibility standards for people with disabilities.

Only in 20% of the FHC’s, a wheelchair user is accessed to different department (information, doctor, lab, vaccine) of a FHC by his own. This is related with the location of these sections (all in one flat) considering that in 93.5% of the FHC’s accessibility can not be achieved vertically for all, if different department are located in different flats, this kind of accessibility is out of question.
CONCLUSION

Accessibility analysis that takes location quality as a basis shows that the accessibility routes to FHC’s by walk or by public transportation is limited in means of width, surface texture and level differences. When private auto is used, only half of the FHC’s have a secure waiting and stopping lot, only one third have a parking lot and parking lot accessibility can only be achieved in one parking lot. It was also observed that parking lots are prevalently not suitable for night usage and are open to atmospheric effects. There is a level difference in most of the building between sidewalk and ground floor and ramps are placed for achieving accessibility to the FHC’s. The ramps placed to achieve the access of people with disabilities to the building landing are not found suitable as they are non-standard.

The FHC’s generally do not have a usable plan as they are designed together with a public housing or they are located in one or more flats of a building with different function. There are level differences even horizontally in the same flat and suggestions for accessibility are not found suitable. It was observed that non-standard stairs are used to achieve vertical accessibility. The limited number of lifts is not found secure and comfortable for people with disabilities. An easily accessible emergency exit is not present in any of the FHC’s. It was also observed that the toilets assigned for people with disabilities are not suitable and that it is impossible for a wheelchair user to use these toilets. In FHC’s, the accessibility of a disabled person (patient, companion or employee) to different services (lab, clinic, toilet, lab) by himself is very limited. An arrangement that will achieve accessibility and usability by two or more senses (feel, hear and see) does not exist in any FHC’s. Therefore FHC’s provide limited accessibility for orthopedically people with disabilities while they are too far away from an understanding where a visually disabled person can independently move. Hearing-impaired people have more advantage as most of the destination signs are written and are visually accessible. In case of multiple disabilities, one of which may be the reason for visiting the FHC, it was determined that no FHC’s have such kind of visitability.

As a result, the usability of the built environment is very important for all that can use their environment as far as accessibility is achieved. This importance makes “accessibility and usability for all” a primary right and priority especially in health buildings, for a sustainable high quality life. These basic right and priorities should be assured by national and international standards related with health regulation and accessibility. Although theoretically these formal documents exist for years, accessibility right for all is not a common practice in Turkey so it is still not adopted. Therefore, it is limited with individual applications in a country that prepared its formal inventory in 2004 and will produce policies and apply them according to this inventory. For this reason;

- Health policies should be patient oriented, the health service must be accessible for patients (who are passive users of FHC’s), for employees who provide service to them and for all patient companions.
- It is inevitable to provide a comfortable transportation to FHC’s in relation with environment and city. Therefore standard parking lots, sidewalks, bus stops and public transportation vehicles should be accessible.
- All FHC’s (independent health centers and centers providing health service together with other services) should comply to construction law, health regulation and accessibility standards.
- As location analysis show that FHC’s have serious insufficiencies regarding accessibility and usability, responsibilities should be taken in every stage (from design to licensing) and FHC’s, with location quality and location setup, should convert into accessible, usable structures providing user satisfaction, coalescing with the human status of being good.

REFERENCES


