ORIGINAL ARTICLE

Evaluation Design of Banks: Development and Validation of a Comprehensive Assessment Tool Based on Principles

Mojtaba Keshavarz[1], MSc; Rahman Zare[2], MSc; Fateme Alibeygian[1], MSc; Mina Shahbazi[1], MSc; Hamid Jamshidi[1], MSc; Hamidreza Mokarami[3], PhD

[1]Student Research Committee, Department of Ergonomics, School of Health, Shiraz University of Medical Sciences, Shiraz, Iran
[2]Student Research Committee Department of Occupational Health, School of Health, Shiraz University of Medical Sciences, Shiraz, Iran
[3]Department of Ergonomics, School of Health, Shiraz University of Medical Sciences, Shiraz, Iran

Correspondence:
Hamidreza Mokarami, PhD; Department of Ergonomics, School of Health, Shiraz University of Medical Sciences; P.O. Box: 71645-111, Shiraz, Iran
Tel: +98 71 37251020
Fax: +98 71 37260225
Email: hamidreza.mokarami@yahoo.com
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Abstract

Background: Universal Design (UD) means designing the products and environments everyone can use as far as possible without requiring specialized compatibility or design. The present study aimed to design and develop a comprehensive and valid checklist to evaluate the design of banks based on UD principles and implement it in Iranian banks.

Methods: Based on the seven UD principles and using a mixed methods sequential exploratory design, an initial checklist with 61 items was developed. Then, its psychometric properties were evaluated based on face and content validity and inter-rater agreement. The final checklist was prepared based on the results of this stage and used in the next stage to evaluate the design of 17 banks.

Results: The final checklist consisted of 10 areas (as per the seven UD principles). The Content Validity Ratio (CVR) and Content Validity Index (CVI) were calculated as 0.91 and 0.93, respectively. Based on areas of the checklist, all the evaluated banks showed many problems, the most significant of which were related to the areas of equal use by different groups, flexibility in use, and the size and space of access and use.

Conclusion: The present study's findings led to the design of a comprehensive and standard checklist to evaluate the design of banks in terms of UD principles. The results indicated that the UD principles were not observed in most studied banks, and they need to implement targeted design interventions.

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Introduction

"Disability" refers to any condition or impairment that restricts an individual's ability to perform tasks in a manner considered typical or that deviates from normal functioning.[1, 2] This inability is due to the interaction of the individual with a disability, attitudes, or environmental barriers that prevent their complete and effective participation in society compared to other individuals.[3] According to the Global Burden of Disease (GBD) study, approximately 975 million (19.4%) individuals over 15 years of age live with a disability. The GBD estimates that 190 million (3.8%) individuals have severe disabilities.[4] The global disability rate is rising due to aging populations, higher rates of chronic illnesses, and improved methods for measuring disabilities. On the other hand, the disability rate in developing countries, like Iran, is higher than the global norm. The 2011 census in Iran indicated that about 13 out of 10,000 people had some form of disability.[5] Like other countries, Iran is experiencing an increasing disability prevalence.[6]

Most individuals with a disability have numerous

abilities despite being exposed to physical and sensory limitations. If placed in a suitable environment, they can maximize their abilities.[7] Many disabilities of disabled individuals are due to the design of an inappropriate physical environment that, if resolved, will make it possible to create a space that meets their needs.[8] The impossibility of disabled individuals to benefit from urban facilities is not due to their disability but the inability of society to adapt these facilities to the needs of this group of citizens.[9] It's essential to consider the needs of individuals with disabilities, particularly when designing urban spaces and facilities, to create living environments accessible to all members of society. In other words, the urban environment must provide more services to vulnerable groups so they are not forgotten or marginalized. The reduction of physical and sensory functions in society hinders the social participation of individuals. In that case, they can be considered "disabled" just like a person in a wheelchair, whereas there should be no distinction between older people and individuals with physical problems; even a young mother with a baby carriage may be considered "disabled" depending on circumstances.[10] in contrast, by adopting a Universal Design (UD) approach, all users are considered members of the same community, including individuals with heterogeneous characteristics and abilities.[11]

Urban public spaces and facilities must meet the critical needs of individuals with a disability as part of urban society. These spaces can appropriately play an equal role in providing equal opportunities for all social groups and helping increase urban mobility. To meet this demand, it is necessary to use UD principles to design urban spaces and facilities. This design approach means understanding the diversity of the user community and considering this diversity in making decisions regarding product development to meet the needs of a larger group of users.[12]

UD refers to designing products and environments that everyone can use as far as possible without requiring specialized compatibility or design. This design method facilitates the use of all spaces and devices for each individual.[13] In fact, the UD pays attention to all people, including people with disabilities, older people, children, and others who are somehow disabled. Universal design, which doesn't label individuals and benefits all users, aims to create inclusive designs suitable for people of all ages, backgrounds, and physical or mental abilities.[11, 13, 14]

The motivation behind these new approaches is to incorporate the needs of older individuals and those with disabilities into community-level public designs.[15] According to the UD approach, the complete success of a product in the market requires the consideration of three factors, including individuals (in terms of usefulness, usability, and users' desire to use that product), profitability (practicality in terms of commercial and technical aspects and being competitive in the market), and the environment (in terms of natural resource consumption, waste control, and energy consumption).[12] This design approach has seven fundamental principles applicable to product design methods. These principles are as follows:[16, 17] 1) Equitable use, 2) flexibility in use, 3) simple and intuitive use, 4) perceptible information, 5) tolerance for error, 6) low physical effort, and 7) size and space for approach and use.

It's crucial that public buildings, being open to everyone in cities, incorporate the concept of Universal Design (UD)[11] to facilitate everyday use for a wide range of users. Banks are among urban spaces where various groups of people come and go. Given the large population of clients, it is necessary to pay attention to the primary and appropriate design of bank buildings for community groups and consider the universal principles in their designs. For this purpose, tools such as comprehensive and standard checklists are needed to evaluate the design of bank spaces in terms of UD principles. These assessments can be a reasonable basis for designing and implementing targeted interventional programs and improving bank designs. Although standards have been set for minimum needs and requirements to provide individuals' minimum access in urban buildings in some countries,[18] our surveys show that no standard and valid tool has been designed so far for evaluating the design of banks in terms of UD principles. However, having an accurate assessment is impossible without access to such a tool. Therefore, this study aimed to design and develop a standard, valid, and comprehensive checklist to evaluate the design of banks in terms of universal principles and determine the tool's psychometric properties. Then, based on this checklist, the design of 17 banks was evaluated in the Iranian cities, including Shiraz, Kerman, Yazd, and Hamadan.

Methods

Research Design

The authors employed a mixed methods sequential exploratory design to create a comprehensive checklist for assessing bank designs based on UD principles. The qualitative aspect of the study aimed to identify criteria related to the seven UD principles in various bank spaces. This was achieved through researcher observations, expert panel input, and a review of standard design texts and guidelines in different settings. The quantitative part of the study was conducted to evaluate the tool's psychometric properties and the design of Iranian banks. Figure 1 shows the general framework of the study. The study protocol was reviewed and approved by the Research Ethics Committee of Shiraz University of Medical Sciences (IR.SUMS.SCHEANUT.REC.1402.027).

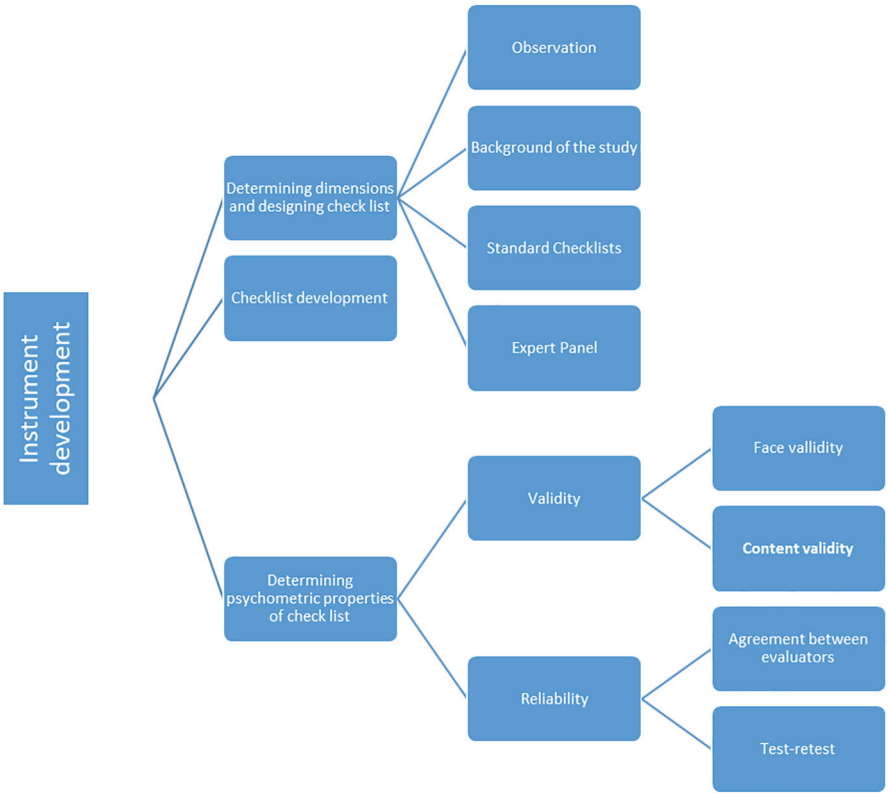

Figure 1: Study framework

Checklist Dimensions and Items

Conceptual Definition of the Seven Principles of UD

A conceptual definition was developed for each of the seven UD principles through a literature review. The concept explanation provided a comprehensive definition of the principles required to design bank spaces based on the UD principles.

Field Observation

At this stage, five private and government banks were randomly selected. After visiting, the research team analyzed the different bank spaces and identified the desired criteria based on the conceptual definition of each of the seven UD principles.

Literature Review

The Scopus, PubMed, Web of Science, Embase, and Science Direct databases were used to find the criteria of UD principles in the articles. For searching, the keywords were *UD*, *inclusive design*, *design for all*, *barrier-free design*, *accessible design*, *human factor and ergonomic design*, *design procedures*, and *design approaches*, used separately and in combination. To increase the search sensitivity and find more sources, the reference lists of the selected articles were also examined manually. After searching the articles and preparing the initial list, their titles were first reviewed by two experts in the project, and the duplicates were removed. Then, the titles and abstracts of the remaining articles were carefully studied, and the articles assessing essential factors in public buildings were selected. Finally, the full texts of the remaining articles were examined, and the desired criteria were extracted.

Standard Checklists

Standard checklists have been developed to assess different city spaces, such as hotels and sanitariums. A comprehensive review of the Google search engine was performed using the mentioned keywords; then, the standard design checklists were reviewed, and the desired criteria applicable to bank designs were extracted.

Experts' Panel

In three sessions, all criteria for different bank spaces extracted in the previous three stages were discussed in the expert panel of 12 university professors of ergonomics, industrial design, rehabilitation, and civil engineering. Finally, the authors developed suitable items after achieving a consensus on spaces and criteria, aligning with the operational definitions of the seven UD principles.

Tool's Psychometric Properties

The authors evaluated the checklist's validity and reliability to ensure the accuracy of the results. Psychometric properties were assessed following the initial item formulation.

Face and Content Validity

The checklist was provided to 10 ergonomics, industrial design, rehabilitation, and civil engineering

professors to check qualitative content validity. They were asked to check each item's grammar, sentence structure, and phrasing and express their suggestions for improving them. After applying the desired changes, the final checklist was designed and developed in several steps. Then, the Content Validity Index (CVI) and Content Validity Ratio (CVR) were assessed. For this purpose, two separate files were first sent to 15 university professors and experts in research. The first file assessed the CVI so that the experts were asked to separately examine each item's three criteria, relevance, clarity, and simplicity.[19] According to the instructions, a CVI greater than 0.79 is appropriate; between 0.7 and 0.79 requires revisions; less than 0.7 is unacceptable and warrants item removal.[19] The second file was to assess the CVR, designed by Lawshe.[20] To examine this criterion, the experts were asked to assess the degree of necessity of each item. According to Lawshe's table, items with a CVR above 0.49 (for 15 specialists) and a significance level of $P<0.05$ are deemed essential, while items with lower CVR scores are recommended for removal.[20]

Reliability

The reliability of the checklist was evaluated using the inter-rater agreement coefficient. For this purpose, 17 Iranian banks in Shiraz, Kerman, Yazd, and Hamadan were randomly selected from different city areas. Four ergonomics experts assessed these banks. These assessments were then repeated by them one month later. An Intraclass Correlation Coefficient (ICC) with a 95% confidence level was used to evaluate the inter-rater agreement. The Spearman correlation coefficient was used to examine the correlation between the domain and total scores in the two assessment stages. The collected data were analyzed using SPSS version 23 software.

Results

Checklist Dimensions and Items

In line with UD criteria, the conceptual definition of each of the seven UD principles was as follows:

1- Equitable use: The product should be available for a wide range of people with different capabilities, and any separation should be avoided. Privacy, security, and safety requirements must also be equally accessible, and the design must be attractive to all users.

2- Flexibility in use: The product should cover a wide range of individual priorities and preferences and allow choices for different people, increasing user accuracy and compatibility with user speed.

3- Simplicity and intuitive use: The product should be easily used without needing previous experience and knowledge, language skills, and concentration. Designs should eliminate unnecessary complexities, align with user expectations, and be intuitive.

4- Perceptible information: Regardless of the environmental conditions or sensory abilities of the user, the product should convey the required information to the user by various tactical, verbal, audio, and visual modes and be understandable to all individuals with sensory limitations. There must also be sufficient contrast between the essential information and the environment.

5- Tolerance for error: The product must have a high tolerance for errors and prevent risks and adverse consequences of accidental or unwanted actions. For this purpose, the elements' arrangement should be considered to minimize errors and dangers and eliminate dangerous elements.

6- Low physical effort: The product should be used easily and with minimal fatigue. When using the product, the user should be able to maintain their natural posture and do their job with reasonable physical force and without constant physical effort.

7- Size and space for approach and use: Adequate dimensions, size, and space must be provided for product access, use, and work, irrespective of the user's body, posture, or mobility.

Given the results of field observation, literature review, standard checklist review, and discussions

Table 1: The results of ICC and Spearman correlation coefficient by bank areas

Bank part	Intraclass Correlation Coefficient 95% CI First turn	Intraclass Correlation Coefficient 95% CI Second turn	Correlation Coefficient between the first and second turn
Exterior area of the bank	0.995 (0.986-0.999)	0.996 (0.989-0.999)	0.984†
Entrance and exit path	0.951 (0.876-0.987)	0.915 (0.786-0978)	0.917†
Entrance door	0.971 (0.925-0.992)	0.949 (0.871-0.988)	0.807†
Help signs and information monitors	0.954 (0.883-0.988)	0.975 (0.936-0.993)	0.884†
Reception	0.942 (0.853-0.985)	0.922 (0.802-0.980)	0.878†
Employee work station	0.975 (0.937-0.993)	0.932 (0.828-0.982)	0.998†
Interior area of the bank	0.995 (0.987-0.999)	0.996 (0.990-0.999)	0.922†
Emergency facilities	0.986 (0.966-0.996)	0.962 (0.903-0.990)	0.848†
Software	0.997 (0.994-0.999)	0.996 (0.994-0.999)	0.999†
Toilet	0.999 (0.997-0.999)	0.998 (0.996-0.999)	0.999†
Total score	0.984 (0.961-0.996)	0.96 (0.946-0.993)	0.93†

*Spearman correlation; †(P-value<0.001)

Table 2: The results of indicators related to 10 areas of the studied banks (n=17)

Dimension	Index	Yes		No	
		Quantity	Percentage	Quantity	Percentage
Entry and exit pathway	The existence of obstacles in the pathway	13	76	4	24
	Sufficient pathway friction	16	94	1	6
	Convenience of the entrance pathway for all individuals to pass	10	58	7	42
	Marking the pathway with signposts	2	11	15	89
	Installation of fences in the pathways	10	58	7	42
	Suitable inclined plane	7	42	10	58
	Suitable lighting at entrances and pathways	17	100	0	0
	Standard stair size (height and width)	15	88	2	12
	Appropriate width of the pathway for all to pass	16	94	1	6
Entrance door	Recognizability of the door (distinction)	14	82	3	18
	Appropriate size of the door for all to pass	16	94	1	6
	Lack of threshold of the door	10	58	7	42
	Automatic opening and closing of the door	13	76	4	24
Bank exterior area	Recognizability of the building and the name of the bank	15	88	1	12
	Placement of the Automatic Teller Machine (ATM) at a suitable height	17	100	0	0
Help signs and notification screens	Recognizability of signs and instructions	13	76	4	24
	Using letters with appropriate size and legibility on the screens	14	72	3	18
	Using an international language alongside the conventional language	0	0	17	100
	Using multimedia notifications to provide services such as queuing	12	71	5	29
	Appropriate size of queuing devices and screens	16	94	1	6
	Recognizability of operator's voice for everyone	10	58	7	42
Reception	Showing the responsibility of each staff member in each counter	10	58	7	42
	Recognizability of counters when entering	16	94	1	6
	Designing the counters for public use	11	65	6	35
	Providing different understandable forms for public use	0	0	17	100
	Appropriate height of counters	11	65	6	35
	Appropriate space under the table	15	88	2	12
	Adjustable seat for all customers to use	11	65	6	35
Employee work station	Adjustable station suitable for the individual body size	11	65	6	35
	Files with separable colors	13	76	4	24
	Standard layout and space of worktable	10	59	7	41
	Simple and understandable software for employees	16	96	1	4
	Separation of counters	14	82	3	18
	Sufficient lighting	17	100	0	0
Toilet	Available toilets	1	4	16	96
	Appropriate width of the entrance and corridors	0	0	17	100
	Appropriate maneuvering space	1	4	16	96
	Appropriate opening and closing of the door	0	0	17	100
	Installation of auxiliary rods	0	0	17	100
	Appropriate height of accessories	1	14	16	96
	Appropriate height of the toilet seat	0	0	17	100
	Appropriate lighting	1	4	16	96
	Flooring with sufficient friction	1	4	16	96
Bank interior area	Floor leveling	0	0	17	100
	Lack of obstacles on the floor	1	4	16	96
	Installation of furniture or waiting space suitable for everyone	1	4	16	96
	Appropriate contrast of furniture color with the surrounding environment	9	53	8	47
	Possibility of moving between floors for everyone	5	29	12	71
	Possibility of easy passage for everyone	16	94	1	6
	Drinking fountain available and at a suitable height	7	41	10	59
	Recognizable trash bins	15	88	2	12
Emergency facilities	All people access to firefighting equipment	9	53	8	47
	Recognizability of firefighting equipment	10	59	7	41
	Standard and recognizable emergency exits	3	18	14	82
	Providing simultaneous audio and video alerts in emergency cases	7	41	10	59
Software	Providing local and international languages	0	0	17	100
	Ease of use	0	0	17	100
	Usability for everyone	0	0	17	100
	The presence of guidelines and warnings during use	0	0	17	100

in the expert panel, ten areas were selected for assessment. These areas included the bank exterior space, entry and exit pathways, entrance doors, signposts and information displays, reception, staff workstation, toilet, interior space, emergency facilities, and software. Using conceptual definitions for the seven UD principles, the authors designed 61 items across ten areas. (Appendix 1).

Psychometric Properties

Based on the CVI and CVR findings, all 61 items were evaluated as appropriate. The CVR and CVI were calculated to be 0.91 and 0.93, respectively, showing appropriate content validity from the experts' point of view.

The assessment results showed an excellent inter-rater agreement. The ICC was higher than 0.9 in all ten areas of the checklist. The correlation coefficient between the mean scores of all checklist items (61 items) was 0.98 (P<0.001) in the first round and 0.96 (P<0.001) in the second round (Table 1). There was a very high correlation coefficient between all tool domains in the first and second stages of the test, and it was calculated to be 0.93 (P<0.001) for all items, indicating excellent reliability of the tool (Table 2).

Design Status of Banks

This study's compliance with Universal Design (UD) principles in bank spaces varied. The highest adherence to UD principles was observed in software (100%), exterior space (94.11%), and entrance doors (76.47%), while the lowest compliance was found in health service (0.03%), emergency facilities (42.64%), and staff workstation (44.86%). Figure 2 presents the detailed results of the UD principles in different areas of the banks under study.

Regarding design criteria in the entry and exit pathway areas, most discrepancies were related to signposts by 89% and inclined planes by 59%. Regarding design criteria in the entrance door area, most discrepancies were related to the lack of threshold by 41%. Regarding design criteria in the bank's exterior space, most discrepancies were related to the incompliance regarding the recognizability of the building and the bank's name by 12%. Regarding signposts and information displays, most discrepancies were related to the use of international and conventional languages by 100%. Regarding the reception area, most discrepancies were related to the presentation of different comprehensible forms for public use by 100%.

Regarding the staff workstation area, most discrepancies were related to the desk standard arrangement and space by 41%. The toilet area had the poorest compliance status, so no public toilet was found in the studied banks. Regarding the bank interior space area, most discrepancies were related to the possibility of moving between floors by 71% and the availability of a drinking fountain at a suitable height by 59%. Regarding emergency facilities, most discrepancies were related to standard and detectable emergency exits by 82% and simultaneous provision of audio and video alerts in emergencies by 59%. Finally, the designed software was compliant with UD principles. Table 1 shows the detailed results of the criteria related to the ten areas of banks.

Discussion

In this study, a comprehensive, standard, and valid checklist was designed and developed for the first time to evaluate the design status of banks in terms of UD principles. The results of this mixed study explain the essential criteria needed to design different areas of banks in terms of UD principles and develop a tool with appropriate psychometric properties to evaluate these criteria.

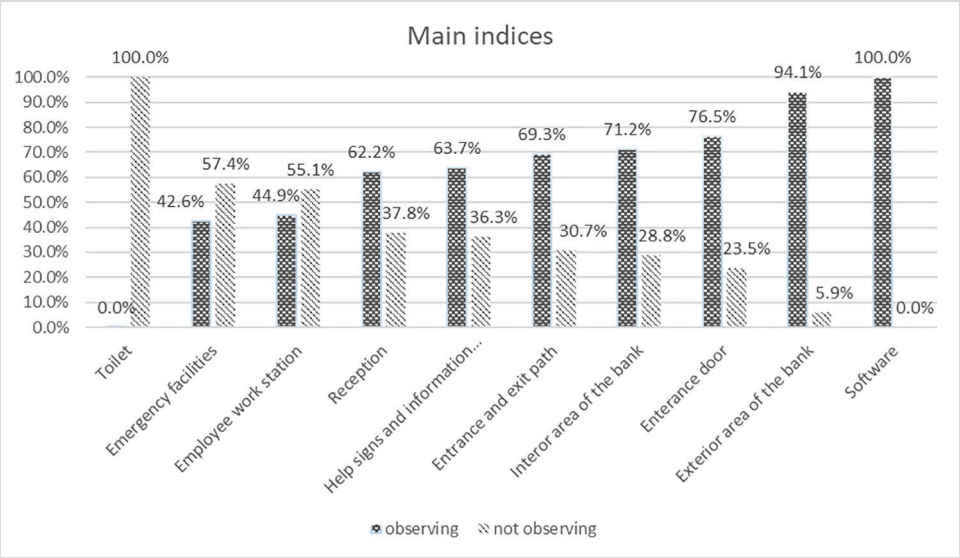

Figure 2: Assessing the status of observing the indicators of universal design principles in different areas of the studied banks

Assessing and reporting content validity to apply research tools are essential.[21] Regarding the publication of scientific findings, among the three topics of validity, reliability, and generalizability of findings, validity is the key topic that provides the basis for scientific research. It is often said that if the research tool is invalid, it will lack effective application.[22] In this study, CVR and CVI were used, and the value of both indicators in all items was higher than 0.7. The content validity value of the sum of the checklist items indicated the checklist's high validity. Since validity refers to designing a tool, a valid test has the required competency to measure the subject under study. In many studies, it seems that despite the great attention of researchers to methodology or data analysis, such attention is less true regarding the research tool's validity, so providing adequate information about tool validity and reliability is a subject that has not been dealt with in some studies; this is one of the strengths of the present study.

One of the basic principles of ergonomics in office environments is the importance of attention to ergonomic furniture to fit the variety of staff sizes.[23] This factor allows the staff to adjust their workstation according to their needs.[24] If the furniture is not comfortable and user-friendly, it will significantly affect work style and efficiency.[25] At the same time, by applying simple principles of human factors, many problems can be avoided.

The inappropriate pathway was one of the main problems of the studied banks. Although a pathway was designed for the passage of wheelchair users in these banks, they were not designed according to standard principles. Some characteristics of a standard pathway are the pathway's change degree by ≤8%, slope length ≤10 meters, width by one meter, lack of curvature, and the angle between the two sloping intersections by ≥2.[26]

Installation of public toilets is one of the necessities that should be considered in public spaces. However, none of the studied banks paid attention to this vital point. Some issues that should be observed in the design of public toilets regarding the observance of UD principles are accessibility for all (at a distance of 150 meters from any point of the building), appropriate width of entrances and corridors (at least 120 cm), suitable maneuver space (150×150 cm space in the toilet), proper opening and closing of the door (open to the outside or sliding), installation of auxiliary bars (a 300 mm horizontal bar at the height of 900-1000 mm by 300 mm from the hinge side located), the suitable height of accessories (at a distance of 110 to 140 cm), the suitable height of toilet seat (45 to 50 cm height), suitable lighting (≥200 lux), and flooring with sufficient friction.[13]

Among all the areas reviewed, the software area exhibited the highest compliance with UD principles. This was attributed to its use of conventional and international languages, ease of use, usability, and guidelines and warnings during use.

Like previous research, it underscores the importance of considering the entire community as users in the design of public buildings. On the other hand, people in the community have different visual, auditory, and mental characteristics, and it should not be forgotten that users with temporary or permanent physical or mental disabilities also use public buildings.[11] However, many of these points were not fully considered in the design of banks in this research environment.

Conclusion

It is required to create facilities that enhance productivity and enable the effective participation of individuals with varying abilities in society. Society must also take steps to bridge the gap and reach out to individuals with varying abilities. This issue increases the possibility of an individual's presence in society psychologically and considers them a member of society. One of the most critical measures in urban areas is adjusting and improving the urban environment, especially crowded and busy places such as banks. The present study findings help design a comprehensive and standard checklist to evaluate banks' design status regarding UD principles. The present checklist has appropriate psychometric properties and can be used as a valid and applicable tool to evaluate the design status of banks and then implement targeted design interventions.

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Conflict of Interest: None declared

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Appendix 1: The final checklist for assessing the design of banks in terms of universal design principles along with complementary explanations

Part	Index	Point				Explanations
		Yes	Needs to be corrected	No	N/A	
Entry and exit pathway	Lack of obstacles in the path					
	Proper path friction					
	Suitability of the entry path for all people to pass (if there is no floor, refer to the stairs or ramps indices)					
	Mark the route with directional signs					
	Installation of fences in the paths					
	Suitable ramp (slope)					Degree of slope changes ≤8% Angle between two sloping intersections ≥2 percent Slope length ≤ 10 meters Slope width 1 meter Slope surface without curvature Installation of 1.5 * 1.5 footpace at the beginning and end of each ramp with an angle ≤ 2% The width of each footpace should not be less than 120 cm The distance between the doors and each ramp should be at least 150 cm
	Sufficient lighting at entrances and paths					
	Appropriate path width for all to cross					It should be more than 200 cm and there should be no obstacle to reduce it to less than 120 cm
	Standard stair size (height and width)					Stair height should be from 15 to 6.17 cm The width of the stairs should be from 30 to 34 cm Stair height should be from 15 to 6.17 cm The width of the stairs should be from 30 to 34 cm The following mathematical relation is valid: 650 mm <2R + T <700 mm Step brake 2% The standard number of stairs in each row is between 3 and 12 Stair width ≥ 120 cm Lighting at the top and bottom of the stairs ≥200 lux The width of the footpace is equal to the width of the stairs ≥120 cm
Entrance door	Door recognizability (distinction)					
	Suitable door size for all to pass					
	No door threshold					
	Automatic opening and closing of the door					
Exterior area of the bank	Recognizability of the building and the name of the bank					
	Placement of the Automatic Teller Machine (ATM) at a suitable height					
Help signs and notification screens	Recognizability of the building and the name of the bank					
	Placement of ATM at a suitable height					
	Recognizability of signs and instructions					

Part	Index	Point				Explanations
		Yes	Needs to be corrected	No	N/A	
	Using appropriate size and legible letters in monitors					
	Using international language with conventional language					
	Using multimedia notifications for providing services such as turn ratings					
	Appropriate size of turn rating machines and monitors					
	Recognizability of operator voice for everyone					
	Showing each employee responsibility in each counter					
Reception	Recognizability of counters when entering					
	Counters design for public use					
	Providing different understandable forms for public use					
	Appropriate height of counters					The height of short counters should be between 75 and 79 and the height of long counters should be between 95 and 125 cm
	Appropriate space under the table					The space under the table should be 68 cm high and 48 cm deep
	Adjustable seat for all customers to use					
Employee work station	Adjustable station suitable for individual body size					
	Files with separable colors					
	Standard layout and space of worktable					
	Simple and understandable software for employees					
	Separation of counters					
	Sufficient lighting					Above 400 lux
Toilet	Available toilet					At a distance of 150 meters from anywhere in the building
	Appropriate width of entrances and corridors					At least 120 cm
	Appropriate maneuvering space					150 cm space in the toilet
	Appropriate opening and closing of the door					whether it opens to the outside or slide
	Installation of auxiliary rods					300 mm horizontal rod is located at a height of 900-1000 mm × 300 mm from the hinge side
	Appropriate height of accessories					At a distance of 110 to 140 cm
	Appropriate height of the toilet seat					A height of 45 to 50 cm
	Appropriate lighting					200 lux and above
	Flooring with sufficient friction					
Emergency facilities	All people access to firefighting equipment					
	Recognizability of firefighting equipment					
	Standard and recognizable emergency exit					
	Providing simultaneous audio and video alerts in emergency cases					

Part	Index	Point				Explanations
		Yes	Needs to be corrected	No	N/A	
Bank interior space	Flooring with sufficient friction					
	Floor leveling					
	Lack of obstacles on the floor					
	Installation of furniture or waiting suitable space for everyone					
	Appropriate contrast of furniture color with the surrounding environment					
	Possibility of moving between floors for everyone					
	Possibility of easy passage for everyone					
	Drinking fountain available and at a suitable height					
	Recognizable trash bins					
	ATM with suitable height					
Software	Providing a traditional and international language					
	Ease of use					
	Usability for everyone					
	Existence of guides and warnings during use					