Trends on Friendly Disability Services: A Bibliometric Review

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ABSTRACT

Accessing public services and carrying out regular tasks can be difficult for those with disabilities. Disability-friendly services are important to them. This is due to the fact that there are equal rights for all human beings in all aspects of life. To get a structural picture and provide significant insights about disability-friendly services, this study conducted a bibliometric analysis. We used the Scopus database, searching for the keyword "disabled-friendly services*", resulting in a total of 200 documents. VOS-Viewer software is used to visualize documents. The results of the study show that research on disability-friendly services began to appear from 1975 to 2023. A few significant subjects relating to disability-friendly services are examined, along with publication patterns, major areas, prominent papers, and publishing locations. This study also supports the fact that the United States and the United Kingdom originated and conducted the majority of the research on disability-friendly services. Australia comes in third. At the national level, research on the subject of services for people with disabilities in Indonesia is still scarce (no one has teamed up with researchers from other nations). The findings discussed here provide significant new information and highlight key takeaways for the future development of disability-friendly services. Additionally, the key developments and service areas for people with disabilities are highlighted.

Keywords: Friendly Disability Service, Bibliometric, Scopus

1. INTRODUCTION

Nowadays, paying attention to people with disabilities is part of fulfilling human rights since they are also creatures of God, with the same rights, even though they live in a different way.[1] General Assembly of the United Nations has issued Resolution Number A/61/106 regarding the Convention on the Rights of Persons with Disabilities (CRPD), namely the Convention on the Rights of Persons with Disabilities, on 13 December 2006.[2].

Human rights in Indonesia are governed by Chapter XA of the 1945 Constitution. It regulates the constitutional rights of people with disabilities as one of its provisions.[3] In addition, through Law Number 39 of 1999 and Law Number 8 of 2016 it is also a manifestation of the state's concern for persons with disabilities.[4] Despite the fact that Indonesia has adopted legislation on accessibility for people with impairments, their execution is ineffective, and discrimination against the community continues.[5]

Based on Government Regulation Number 70 of 2019 a Master Plan for Persons with Disabilities (RIPD) was prepared. RIPD makes the mandate of Law (UU) Number 8 of 2016 concerning Persons with Disabilities more focused through seven strategic goals to be achieved to ensure inclusive development for persons with disabilities. One of the strategic goals is to provide disability-friendly facilities.[6]

Legal documents that have been in effect in Indonesia regarding disability-friendly facilities include Law No. 25 of 2009 Concerning Public Services. This law places a strong emphasis on the requirement that public service providers treat customers fairly and without bias. Public service providers must offer particular assistance to people with impairments, according to Article 29. The Law Concerning Buildings No. 28 of 2002 is similar. This regulation emphasizes that public facilities, including as entrances and exits, horizontal connecting rooms, vertical connections in buildings,

vertical transit, and access to information, must be accessible to people with disabilities. Whereas non-physical accessibility deals with technology, information, and communication.[5]

Nurliana Cipta Apsari and Santoso Tri Raharjo's research concluded that people with disabilities are still subjected to prejudice and social injustice. These difficulties show how the general public views people with disabilities as dependent on other people's sympathy and lacking in independence. Some cities have consolidated their services, making it difficult for people who live in rural areas to access them.[7]

FRIENDLY DISABILITIES SERVICES

People with disabilities have the same rights as everyone else to access appropriate public facilities and assistance in carrying out all of their activities. In actuality, Indonesia currently has extremely few public service facilities for people with impairments.[8]

Markus, who claimed that Indonesia already has its legal instruments but that their implementation is quite shoddy, provides evidence of this. There are hardly any facilities in public locations for people with impairments, such as wheelchair-accessible roads, restrooms, and phone booths [9].

The purpose of writing this bibliometric is to get initial information about scientific articles and literature that discusses the theme of disability-friendly services. This is because accessibility is one of the challenges for people with disabilities to carry out various daily activities. Disability-friendly services can be interpreted as the existence of disability service facilities that must be easily accessible, and not difficult to use. Because, the main problem with disability is the difficulty to appear normal. So public service facilities should be provide convenience.[8]

From bibliometric searches that have been carried out by academics, author found that there are several themes of disability-friendly services as shown in the following table:

Table 1. Several Bibliometric on The Topic of Friendly Disability Services

Author & Year	Number of Document Analysis	Sources	Findings
[10] Qiao G, Ding L, Zhang L, Yan H; 2022	213	WoS	Over the 13-year period from 2008 and 2020, a rising number of research on accessible tourism have been published, but the overall base remains modest. Six modules make up the majority of the research content. Among institutions, the University of Technology Sydney has published the most articles. Countries involved in cooperation include the United States, the United Kingdom, Australia, Portugal, and China. Tourism Management is the primary journal for sharing accessible tourism research. The definition of "accessible tourism," as well as the various scopes of this phenomenon, are revisited. In recent

			years, "experience" and "participation" have emerged as "new favourites" in accessible tourism research, revealing clues into future study possibilities.
[11] Li M, Allen J, Plummer V, Dai Y; 2022	826 (Chinese) 393 (English)	Chinese National Knowledge Infrastructure (CNKI) and Web of Science (WoS)	For the analysis, 826 articles in Chinese and 393 in English were included. In both countries, the total number of publications increased. The top ten prolific researchers and institutions in China and Australia have been identified, as has their collaboration network. The knowledge maps of co-occurring terms then revealed the hotspots of "LTC insurance, disabled elderly, a combination of medical and health care, nursing home" in China and "nursing home, dementia, quality of life, intervention" in Australia. Vital citation burst keywords highlighted the developing trends of "combination of medical and health care, healthy ageing" in China and "polypharmacy, prevention" in Australia.
[12] Qiu D, Lv B, Chan CML, Huang Y, Si K; 2023	8.391	WoS, SCI, SSCI	The development of smart cities can hasten the development of other city concepts. Simultaneously, it can acquire and absorb more advanced models from different city concepts in order to enrich itself. The findings show that city idea creation should be more comprehensive in order to assist cities in becoming more inclusive, safe, resilient, and sustainable, which has crucial implications for urban policy and practice. The growth of smart cities can hasten the smart growth of other city concepts. Simultaneously, it can acquire and absorb more advanced models from different city concepts in order to enrich itself. The findings show that city idea creation should be more comprehensive in order to assist cities become more inclusive, safe, resilience and sustainable.
[13]	1.865	Scopus	According to the assessment, there will be 160 publications in 2020 compared

Aswan, Annuar; Noor, Mohd; Faizal, Mohd Isa, Mohd; 2022			to 122 in 2015. It may be said that a wide range of study fields are drawn to the topic of disability in higher education. Scholars from the United States generated 43.89% of all papers, outpacing those from 89 other nations. The keywords "students with disabilities", "higher education", "learning institutions" and "special students" used by authors have had a significant impact on online information searches.
[14] Hong, Yi-kyung Wang, Zeyu Cho, Ji Young; 2022	1408	WoS	The findings revealed that research on smart homes for senior citizens started to appear in 1997 and progressively increased, reaching a high in 2015. There was little research in the humanities, social sciences, and design, indicating the need to expand research toward a human-centered perspective, age-friendly technology, and convergence study. The main research areas were technical engineering fields, such as computer science and engineering, telecommunications, with minimal research in those fields.
[15] Ahmi, Aidi; Mohamad, Rosli; 2019	1103	Scopus	The findings showed that since 2001, the growth rate of literature on web accessibility has grown. A mean cooperation index of 2.87 writers per article was found in the 897 multiauthored documents (81.32%) that were produced. With 265 (20.87%) published documents, The United States of America (USA) is the most productive nation in the analysis. With an average of 48 citations each year, Lawrence and Giles (1999)'s work stands out as the most often mentioned piece. Overall, the rise in web accessibility research points to a rising understanding of the subject's significance and particular needs.
[16] Asghar,Ikram; Cang,Shuang;	1909	Scopus	How developed nations are funding AT research for the welfare of dementia patients. The USA took the top spot as

Yu, Hongnian; 2017			a contributor, with 503 articles and a 16% annual growth rate, followed by the UK with 399 publications and a 22% annual growth rate. Germany is sixth with 101 publications, but it has a better citation rate (16.43%) than the United States (13.34%). Italy, Spain, and the Netherlands stand out as the top collaborative research contributors with high percentages (84%, 84%, and 79%), despite the fact that all 10 nations produce good collaborative research. With the exception of Canada, Germany, and Spain, every one of the top 10 nations has national dementia programs in place. Overall, analysis reveals that the UK and US are investing heavily in AT research for dementia patients. Additionally, both of these nations have formed national dementia programs.
[17] Gherhes, Vasile; Simona, S; Dejica-cart; Daniel Liviu, C Alina; Marcela; 2023	1065	WoS	The purpose of this paper is to observe the use of the Easy-to-Read term in the international scientific literature to learning (intellectual) disabilities. The greatest number of publications on this topic were 16 in 2020 and 14 in 2021, which suggests that there is little interest in this area of study. The study is significant since it clarifies the existing situation of the subject and looks to predict future trends in this field.
[18] Leonidas, Alfredo; Sierra-liñan, Fernando; Cabanillas-, Michael; 2023	200	Dialnet, EBSCO, ERIC, IEEE Xplore, Redalyc, SAGE, ScienceDirect, Scopus, and Wiley	Due to the paucity of studies that address all three of the important terms (educational software, students with intellectual disabilities, and basic education), the use of educational software in the instruction of students with intellectual disabilities is still largely unexplored. However, based on our research, we conclude that it is crucial since it makes it easier for students to construct instructional activities and to access the materials needed to do so.

Several bibliometrics that have been carried out by academics, seen covering the field of tourism, long term care insurance for the elderly, smart cities that are inclusive of disabilities, disability in higher education, accessibility in literature on the web, accessible technology for dementia, accessible literature for learning disability, educational software for intellectual disability. This bibliometric, in contrast to others, aims to describe the development of disability-friendly services.

2. METHODS

The presentation of the research questions, data collecting, preparation, and data analysis comprise the four steps of the research methodology.[19] All techniques and methods are validated and take into account prior research on services that are accessible to people with disabilities and bibliometric analysis. The purpose of this paper is to answer the following questions:

1) Who is the trending author's name on disability-friendly services?
2) Which countries are conducting research on disability-friendly services?
3) What is the trend of disability article research?
4) Which research topics are the subject of more publications?
5) What are future friendly services on disability topics that provide opportunities for further research?

2.1 Search for a Specific Terms

A bibliometric review is a quantitative assessment of journal papers, books, or other types of written work that is commonly employed in scientific disciplines.[20] Utilizing the Publish or Perish software from Harzing, the project began by creating a database about disability-friendly services on Scopus.

2.2. Terms Metric Information

A search of the Scopus database yielded 200 articles between 1975 and 2023. The metric information obtained from Harzing' Publish or Perish is as follows:

Table 3. Metrics Information of Data

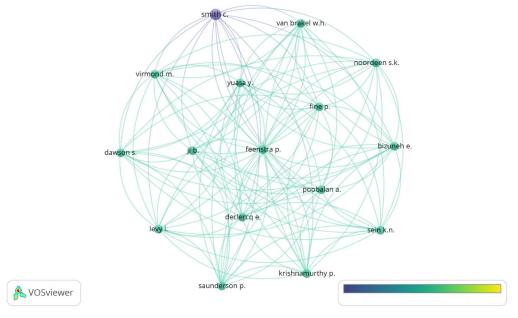|	
Publication Years	1975-2023
Citation Years	48 (1975-2023)
Papers	200
Citations	4151
Cites/year	86,48
Cites/paper	20.76
Author/paper	1
h-index	34
g-index	54
hI-norm	34
hI-annual	0.71
hA-index	10
Paper with ACC >= 1,2,5,10,20	140, 92, 30, 11, 2

2.3 Reference Management

Following the development of research questions, data sets were extracted, preprocessed, and analyzed in a variety of ways, including top themes, research trends in pertinent domains, and potential future themes.

2.4 Bibliometric Analysis

One of the "innovative techniques to provide the current trends and improvements of specific knowledge domains" is bibliometric analysis.[21] The search was carried out on June 7, 2023, a total of 200 articles were obtained, then saved in csv format so that they could be read by Vos Viewer for bibliometric analysis.

This section presents a bibliometric analysis of the Friendly Disability Service (FDS) domain. The analysis is carried out in a way that will answer Research questions are formatted in section 2.1. The results analysis feature and the citation report feature available on Scopus were used for analysis, which is standard for this type of study.
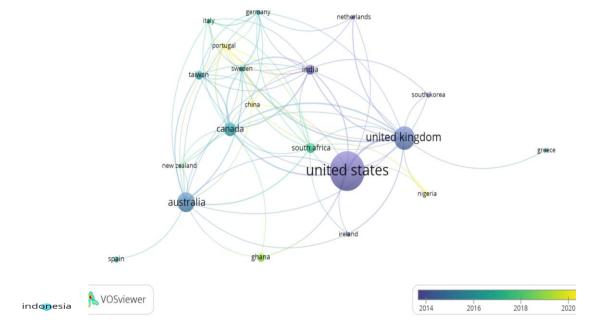
3. RESULTS AND DISCUSSION

3.1 Diagram Author

From the author overlay diagram, it can be seen that the initial author for this theme was Smith C (marked in purple), besides the authors who appeared in the following year, such as: Dawson S; Declercq; Freenstra P.Fine P.; Ji B; Krisnamurthy P; Levyl; Noordeen S.K; Poobalan A; Saunderson P; Sein K.N; Van Brakel W.H; Virmond M; Yuasa Y.

Since the author's name is not highlighted in yellow in the overlay diagram, it may be inferred that new authors should be encouraged to participate in research in this area.
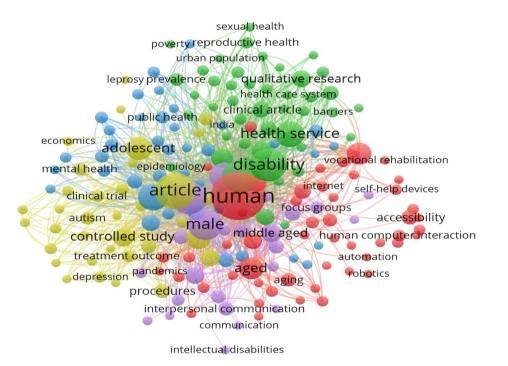
3.2 Diagram of International Co-Authorship

The following table shows countries that are concerned about disability-friendly services scientifically.

No	Cluster 1 (Purple)	Cluster 2 (Green)	Cluster 3 (Light Blue)	Cluster 4 (Blue)	Cluster 5 (Yellow)
1.	Greece	Canada	Germany	Australia	China
2.	Ireland	Ghana	Italy	New Zealand	Portugal
3.	Nigeria	India	Netherland	Spain	
4.	South Africa	South Korea	Sweden		
5.	United Kingdom	United States	Taiwan		

The top 3 countries, the United States, the United Kingdom, and Australia, may be seen in the diagram as paying attention to the issue of disability-friendly services. It is identified by the circle's size, starting with the biggest, and by the darkest hue. Portugal and China are two nations that have only recently begun to take handicap issues seriously. It has a yellow marking.

It is clear from the network diagram that no other countries are connected to Indonesia. This means that Indonesian academics working on disability issues must establish contacts in order to collaborate with other academics in other nations.

In line with the diagram's trend for disability research articles. There are six clusters of thematic trends relating to disability-friendly services, according to Vos Viewer data. Cluster 1 (red) consist of 45 items. Humanity is Cluster 1's dominant theme. Then, thirty-six entries are present in Cluster 2 (green). The most prevalent issue brought up here is child. There are 25 items in Cluster 4 (the yellow-colored cluster). The theme of adolescence sticks clearly. There are 22 items in Cluster 5 (purple). This cluster's most intriguing theme is qualitative research. And, the last but not least, there are 21 objects in Cluster 6 (light blue), which is represented. The most prevalent topic in this is female.

3.3 Diagram Co-Occurance

The details of the themes in each cluster are shown in the following table:

No	Cluster 1 (red) 45 aitem	Cluster 2 (green) 36 aitem	Cluster 3 (dark blue) 26 aitem	Cluster 4 (yellow) 25 aitem	Cluster 5 (purple) 22 aitem	Cluster 6 (light blue) 21 aitem
1.	Accessibility	Autism	Aged, 80 7 over	**Adolescent**	Attitude to health	Adult
2.	Activity of dailiy living	Autism spectrum disorder	Barriers	Anxiety disorder	Caregiver	Awareness
3.	Aged	Cerebal palsy	Covid-19	Clinical trial	Delivery of healthcare	Canada
4.	Aging	**Child**	Cross-sectional studies	Controlled study	Developing country	Children with Disabilities
5.	Assistive technology	Child development	Epidemiology	Cost effectively analysis	Environ-mental factor	Communication
6.	Automation	Child health care	Ghana	Cost-benefit analysis	Healthcare system	Comorbidity
7.	Children	Child parent relation	Health	Depression	Health knowledge, attitude, practice	Coping Behaviour
8.	Daily life activity	Chronic disease	Health care	Disability evaluation	Health personel attitude	Education
9.	Decision making	Community	Health Care need	Disease severity	Health policy	**Female**
10.	Dementia	Community care	Health care utilization	Disease transmission	Health status	Human Relation
11.	Design	Community health services	Health promotion	Economic aspect	Internet	Information Processing
12.	Disability	Developmental disability	**Health service**	Follow up	Patient attitude	Intellectual Disabilities

No.						
13.	Disabled person	Developmental disorder	Health service need & demand	Health care cost	Patient care	Intellectual Impairment
14.	Elderly care	Disabled children	Health survey	Health education	Priority journal	Interpersonal Communication
15.	Employment	Early intervention	Learning	Leprosy	Qualitative research	Male
16.	Environment	Financial management	Pandemic	Major clinical study	Quality control	Middle Aged
17.	Exercise	Government	Poverty	Medical research	Rural area	Persons with Disabilities
18.	Health services for the age	Handicapped child	Prevalence	Mental health care	Skill	Psychometrics
19.	Home care	Health care planning	Public health services	Outcome assessment	Social interaction	Students
20.	Human	Health program	Reproductive health	Prevention and control	Social participation	Training
21.	Human computer interaction	India	Risk factor	Procedures	Social support	Young adult
22.	Independent living	Infant	Sexual health	Psychology	Thematic Analysis	
23.	International classification of Functioning, disability & health	Mass screening	Social environment	Randomized Controlled Trial		
24.	Long term care	Mental disease	Urban area	Treatment Outcome		
25.	Need assessment	Mental health	Urban population	United Kingdom		
26.	Patient care planning	Mental health services	Very elderly			
27.	People with disability	Organization & management				
28.	Physical activity	Parent				
29.	Physical disability	Patient referral				
30.	Practice guideline	Pregnancy				
31.	Quality improvement	Preschool child				
32.	Quality of life	Program evaluation				
33.	Rehabilitation	Public health				
34.	Robotics	Risk assessment				
35.	Self help device	School				
36.	Standards	United states				
37.	Technology					
38.	Telemedicine					
39.	Total quality management					
40.	Transportation					
41.	Universal design					
42.	User friendly					
43.	Visually impaired					
44.	Vocational rehabilitation					

45.	WHO					

3.4 Diagram Overlay of Theme

From the overlay diagram, it can be seen that cluster 1 (highlighted in purple) is the earliest theme to appear, and cluster 6 (highlighted in yellow) is the most recent theme related to disability-friendly services.

4. CONCLUSION

The findings indicate that between 1975 and 2023, research on services geared toward people with disabilities started to emerge. The primary geographical regions (countries), prevalent themes, and authors were just a few of the significant topics related to disability-friendly services that were investigated. This study also provides evidence that the majority of research on services that are accessible to people with disabilities is conducted in the United States and the United Kingdom. Third place goes to Australia. Research on services for people with disabilities in Indonesia is still very little at the national level (no one has worked with researchers from other nations). The conclusions presented here offer essential new information and point out key regions for the future development of services that are accessible to people.

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