

A Scientometric and Bibliometric Analysis of the Scientific Literature on Models of Disability

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Abstract. *One of the biggest problems faced by people with disabilities is that society's perception of disability exacerbates their suffering. Research on disability has not shown much interest over time, with researchers tending to analyze disability marginally or only from a single direction, that of treating the deficiencies that these people suffer from, and less from a social point of view, and the barriers that they encounter in daily life. The purpose of this study is to observe the trend in scientific literature regarding the way of approaching disability and to observe which models of disability tend to lean towards. Over time, several models of disability have been developed, and these have been debated and interpreted differently by specialists. Of these, the individualized medical model and the social model are the most debated models, being considered the most comprehensive. The way society perceives disability has a crucial impact and directly and permanently affects people with disabilities, influencing their lives from all points of view. For this, we conducted a bibliometric and scientometric research using the Web of Science Core Collection database - Clarivate Analytics (WoS) to observe the number of publications in a period of time, the preferred fields of publication and the trend regarding the interest of researchers in people with disabilities, the countries that are most involved and the main authors in the field. Using VOSviewer to generate comprehensive knowledge maps to analyze the links between different domains to observe the way in which disability is viewed as a whole and the connections between words related to disability. Results further indicate the preponderance of research from the spectrum of the medical model of disability. Through this method of analysis, researchers are able to observe the direction that scientific literature is approaching and to choose future research directions.*

Keywords: models of disability, disability perception, the social model of disability, the medical model of disability, co-occurrence analysis.

Introduction

Societies' tolerance towards people with disabilities has been predominantly low throughout history (Albrecht, 1992; Barnes, 1996). People with disabilities have been and continue to be perceived as marginalized members of society, with others believing that they should be cured, treated, or viewed with pity. In the Middle Ages, there were times when people with disabilities were deliberately killed by the rulers of the time, or there were religious leaders who advocated the killing of people with disabilities (Rezachevici, 2006; Haffter, 1968). This way of looking at people with disabilities spread and continued into the following centuries, when people with disabilities who had characteristics and conditions that could be considered amazing, strange, grotesque, or amusing were exploited by society for the entertainment of the population (Braddock, 2001;

Barnes, 1997). Once the economy began to grow stronger and more stable, people with disabilities began to be helped through acts of charity (Ahmed, 2020; Sheldon, 2001).

New concepts of disability began to emerge and develop in the mid-20th century, with critics of the old model of perception beginning to criticize traditional models of disability, based predominantly or entirely on the medical model, laying the foundations for the social model by attempting to challenge a series of physical, environmental, legal, and other societal barriers, over time, protests have arisen against feelings of frustration due to society's attitude towards these people, a society that defies people with disabilities (Pelka, 2012).

To observe the way scientific literature looks at the phenomenon of disability, we started from the concept of disability models, choosing from the multitude of models debated by specialists in the field the models considered basic for the perception of this phenomenon, namely the medical model and the social model. Given that the medical model views disability as an individual problem that affects only the person with disabilities, words related to the treatment or repair of the person with disabilities should have direct links through the resulting words. On the other hand, approaching disability through the spectrum of the social model should show an inclination of scientific literature in the sense that the analysis of the co-occurrence of words should reveal an inclination of these terms in a social sense, coming partly from society in general, respectively in the sense of the disability barriers created by society. The interest of the disability approach in literature can be observed through the evolution of the terms that have appeared in literature over time, the fields in which they appear, and the evolution in the number of publications published each year. For example, if the term disability or the disability model appears predominantly in publications related to the medical field, it can be assumed that one of the fields of interest in this regard is the medical one, and the way disability is perceived is viewed through the medical spectrum.

Literature review

Models of disability

A model is a human construct used to understand social or technical systems, providing an overview of their processes (Ford, 1999). Disability models provide insight into how society views disabled people and are either seen as people who automatically require medical diagnosis, and subsequent treatment and rehabilitation, according to the individualized medical model (Finkelstein, 1980). Historically, the individualized medical model began to develop during the 18th century (Richard, 2004). The way society perceived disability through this model was that the needs of people with disabilities would be better met in institutions with specialized equipment. This ideology became predominant, giving medical staff a great deal of power to dictate the social lives of people with disabilities (Brisenden, 1986; Oliver, 1990). Therefore, this way of looking at people with disabilities led to a social perspective in which disability was understood from the perspective of the need to research disability to cure it and improve conditions, this being a problem that must be solved so that the individual can function in society to achieve an ideal of people considered normal. medical doctrine focused on repairing these people with disabilities (Swain et al., 2014; Finkelstein, 2001).

The medical (individual) model of disability

This model is known as the "*individual medical model of disability*" or "*medical model of disability*" because the person is considered solely responsible for physical or mental impairments (Heyer, 2007), This model limits disability to a medical problem that restricts certain functions of the human

body (Oliver, 1990). The individual medical model is limited because it suggests that "*disability is something imposed on top of our impairments*" (UPIAS, 1976). According to this individual medical model, people with impairments are disabled by the impairment in question, individually, with medicine playing a role in normalizing the individual (Sheldon, 2001). One of the major problems arising from this model of thinking is that people with disabilities begin to believe that disability has a negative connotation and that they are not normal, do not have a normal body, and are somehow inferior to others because of that disability (Harrison-Obi, 2019; Molyneux, 2021).

The processes of the medical model fluctuate between focusing attention on the individual and neglecting the social context of its occurrence, putting these people with disabilities in difficulty and excluding these individuals not only from society, but also sending these persons to its margins (Oliver, 2017).

The social model of disability

The social model of disability focuses on the environments, barriers, and cultures that stigmatize disability within society. This model does not deny the medical problems of people with disabilities (Oliver, 1990) but attempts to link these to the barriers that society imposes on people with disabilities. The main difference between the two systems is that the social system focuses more on the barriers imposed on disability in society or in the labor market, social or emotional barriers (Krantz, 2009).

UPIAS 1976 stated in the Fundamental Principles of Disability: "*From our point of view, it is society that disables*". The redefinition of disability has been significant to people with disabilities, as it also has political implications, and if disability is seen as a form of oppression, people with disabilities are oppressed and vulnerable groups (Sheldon, 2001). Stephen (2012) mentions that the social model of disability has proposed a new paradigm in which "*constraints, prejudices, and exclusion by society (intentional or unintentional) are the ultimate factors that define who is a person with a disability and who is not in a given society*". The social model generally views disability through the lens of the collective or personal experiences of people with disabilities in society and, according to Brisenden (1986): "*Our experiences must be expressed by ourselves and then integrated into the consciousness of mainstream society.*"

Disability barriers

People with disabilities face several barriers to entering the labor market and performing their job duties (Deselnicu et al. 2024). Discrimination in the labor market, regardless of how it is propagated, translates into real barriers for this vulnerable group, barriers that cause increased levels of stress, barriers that widen the gap between people with disabilities and people considered healthy (Anton et al., 2025). Barriers can be different, complex, and interconnected:

- *Attitudinal barriers* - stem from the attitudes of society, the state, or companies, and these interfere with the inclusion of people with disabilities in the labor market which are *Psychological* or *Affective* barriers that focus on feelings: how we think about, feel about, learn about, and respond to disability and these barriers can have ethical implications (Sahu & Sahu, 2015; Pope, 2005).

- *Systemic barriers* - These types of barriers are environmental barriers or barriers created by societal policies and practices that disadvantage people with disabilities, acting as mechanisms of "structural inequality" (Oud, 2019). In this category there are the *Financial barriers* reflected in the high level of poverty as the additional costs of disability, such as transportation, personal assistance, device maintenance and purchase, or workplace or housing adaptation (Butler & Parr, 1999; Sheldon, 2001), *Legal/political barriers* - lack of legal regulations, more specifically the lack

of legislation in this area or the lack of anti-discrimination policies, and when such regulations do exist, they are often ambiguous, which confuses (Harrison-Obi, 2019; Butler & Parr, 1999; Sheldon, 2001), *Administrative barriers* - policies or procedures discriminate against persons with, hindering the process of inclusion in the workplace (Butler & Parr, 1999; Sheldon, 2001).

- *Technological barriers* - information and communication technologies or many other types of technologies, whether we are talking about mobility, private vehicles, access gates, etc. (Butler & Parr, 1999; Sheldon, 2001).

- *Environmental or physical barriers* that hinder or even block physical access to certain environments and restrict mobility, lack of access means exclusion, and exclusion translates into fewer job opportunities, fewer career opportunities, etc. (Butler & Parr, 1999; Harrison-Obi, 2019; Sheldon, 2001).

Methodology

This paper uses the bibliometric analysis method to map the scientific literature in the field of disability models, aiming to answer some relevant research questions.

Research questions:

- What has been the evolution of scientific publications on disability models in the last 24 years?
- What are the main thematic clusters in the field of disability models?
- What are the countries that publish the most in this field?
- What are the main scientific domains for publications in this field?

Data collection and processing

This paper uses data from the Web of Science Core Collection database - Clarivate Analytics (WoS) only, as it is the most relevant scientific database for the field we are studying. Using the WoS platform guarantees the quality of the literature analyzed, as such databases provide a standardized and easily understandable way to search for information and analyze and interpret it from different perspectives. We used VOSviewer to generate comprehensive knowledge maps to analyze the links between keywords. VOSviewer was designed in 2010 by Van Eck and Waltman using the Java programming language, and can therefore be run on a wide range of platforms (Eck & Waltman). These "*knowledge maps*" are graphs that depict the relationships between trends in the field, development or research trends, and scientific knowledge.

Research methods and tools:

The paper employed quantitative methodology to answer the research questions. The research method was the bibliometric analysis, which is a quantitative research method used to analyze large volumes of scientific data (publications, citations, and metadata) to uncover patterns, trends, and the intellectual structure of the field of disability. As research tools, the authors used the facilities of the Web of Science-Clarivate Analytics database - Web of Science Core Collection for data extraction, Web of Science Analytics, and VOSviewer for generating knowledge maps. Using word co-occurrence analysis, a method often used in scientometric analyses, a series of main links between keywords and other words predominantly used in the specialized literature were studied and interpreted. The search period covered the years 2001 to 2024.

Using the WoS database, its analysis functions were applied to examine several factors relevant to this research and to set the tone for further research. To map the scientific landscape of

these developments, a rigorous search formula was devised, which allowed the extraction of a body of 79,807 documents from the WoS database, published during the 2001-2024 period, of either research articles, review articles, conference proceedings papers, published in the English language.

The search formula was structured into two main components:

$$TS = ("model * of disability" OR "disability model * ")$$

Justification and context of keywords in the query formula

"Models of disability" - These keywords form part of the introspective basis of the present study. These terms were used to try to find articles related to the term “disability” or research on models of disability. The term “model” used alone would not lead the research towards a direction of perception of disability, being a term used in many types of research, but together, used as the expression “models of disability”, it can be made easier to refer to research on models of disability and also to the direction of research in the scientific literature.

The search was conducted for documents published between 2001 and 2024. The final sample included 79,807 documents (research articles, review articles, conference proceedings papers, and early access articles), published in English. Co-occurrence analyses were performed using VOSviewer software to allow visualization and interpretation of collaboration structures and the thematic landscape. Each analysis was designed to answer a specific research question (Table 1):

Table 1. Research questions and associated bibliometric analyses

Research questions	Justification and context	Filters applied
What is the evolution of scientific publications on “ <i>disability models</i> ” in the last 24 years?	Clarivate Analytics	Research articles, Review articles, Conference proceedings, Editorial materials, Letters, Books, published in English, chapters, Early access articles, English language
What are the countries that publish the most regarding this field?	Clarivate Analytics	Research articles, Review articles, Conference proceedings, Editorial materials, Letters, Books, published in English, chapters, Early access articles, English language
What are the main thematic clusters?	Co-occurrence of keywords	min. 10 occurrences, based on the text data, ignore abstract labels, ignore copyright statements, binary counting
What are the main domains in which publications appear?	Clarivate Analytics	Research articles, Review articles, Conference proceedings, Editorial materials, Letters, Books, published in English, chapters, Early access articles, English language

Source: Authors’ own research.

To understand the intellectual structure and direction of research, a co-occurrence analysis of keywords was performed, which identified thematic clusters and provided valuable insight into emerging trends. With the help of VOSviewer, the authors generated knowledge maps based on the text data, ignoring abstract labels and copyright statements, selecting binary counting with a minimum of 10 keyword occurrences.

Results and discussions

Through this study, we tried to observe how disability and disability barriers are viewed within the scientific literature, and the interactions between disability models and disability barriers.

Models of disability

Distribution of publications by year using the keywords "models of disability"

The keywords "models of disability" were used to analyze disability models. Regarding the literature on disability models, 79,807 publications were found in the Web of Science Core Collection database, with the search revealing a total of 79,807 since 2001. Over the last 10 years, publications on research in the field of disability models have increased from 3,038 publications per year in 2014 to 6,923 in 2024, representing an increase of 127,88%, Figure 1:

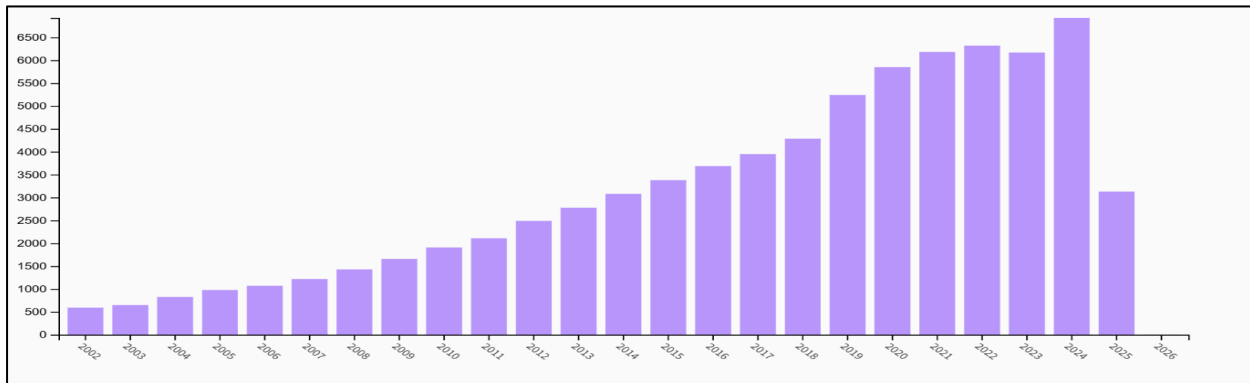


Figure 1. Distribution by year of specialized literature using the keywords “models of disability.”

Source: Web of Science-Analytics.

Research interest in the field of disability models has been growing year on year, increasing steadily since 2001.

Distribution of publications by country using the keywords "models of disability":

It should be noted that the main country carrying out the most research in this direction is the United States of America, with 31,578 publications, followed by England with 8,446 publications and China with 7,690 publications; these countries publish a cumulative number of 47,714, representing 59.9% of all publications in this direction.

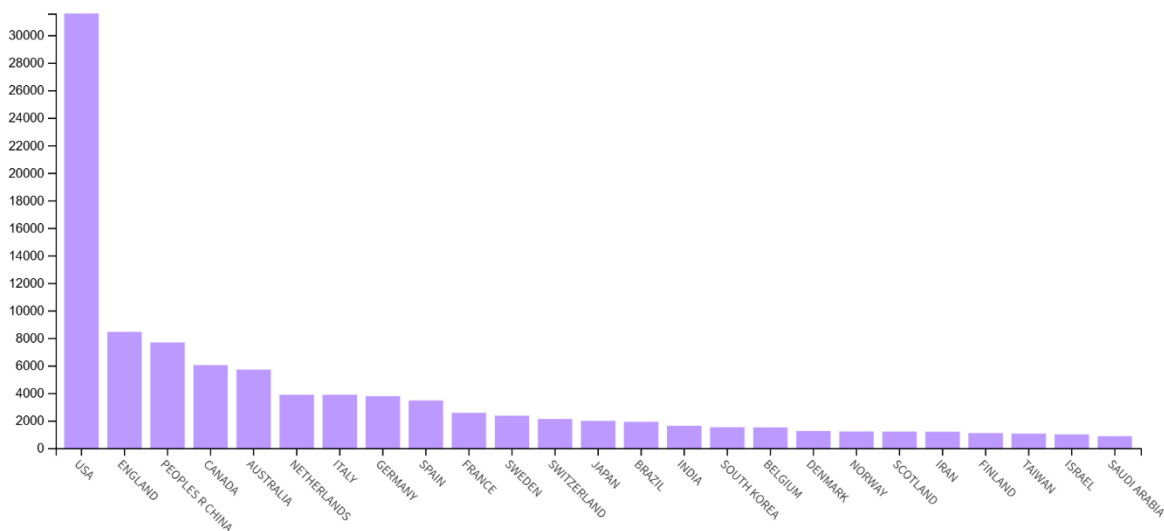


Figure 2. Distribution by country of specialized literature using the keywords “models of disability.”

Source: Web of Science-Analytics.

The United States is the country that publishes the most in this field, being the clear leader, as they published more than the next three countries combined.

Distribution of publications by field using the keywords "models of disability"

Most articles are published in scientific fields such as neurology or rehabilitation, with a fairly large difference between fields within medicine: rehabilitation with 12,245 publications, followed by clinical neurology with 9,790 and neurological sciences with 8,151. This validates our hypothesis that in the scientific world, the medical model is still the one by which most scientific articles are guided and conduct their research, Figure 3:

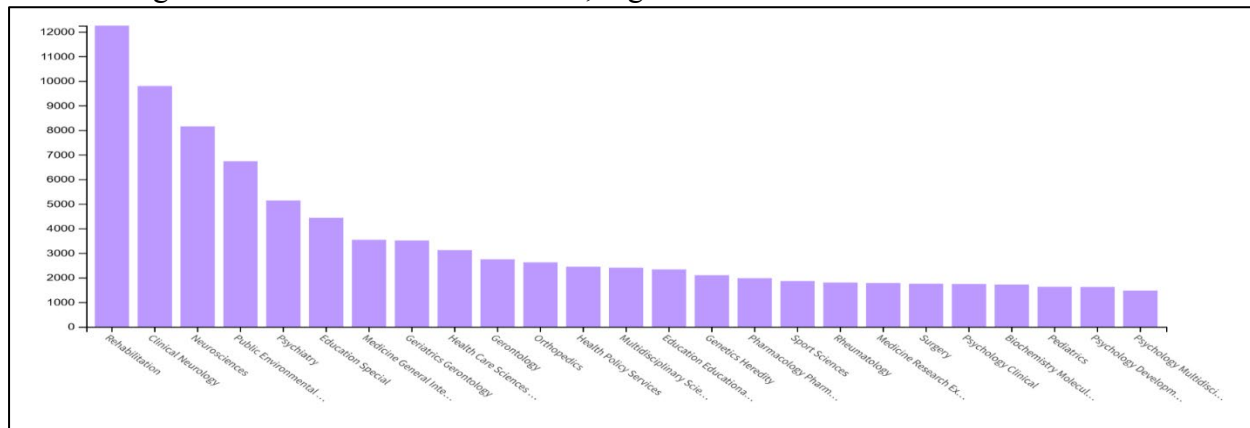


Figure 3. Distribution of publications by field using the keywords "models of disability."

Source: Web of Science Analytics

The main fields are medical, with the first social field being special education, a field that is only in sixth place.

Trends observed using the keywords "models of disability":

Below is a knowledge map showing the links between research conducted in the field of disability models, highlighting the clusters containing the words most frequently used in publications. The knowledge map contains 79,807 publications dating back to 2001. As can be seen, when it comes to disability models in these publications, terms such as "burden" or "global burden," "student," "Down syndrome," "barriers" or "pathway" are predominantly used. Most of the terms that appear in this map belong to scientific fields such as medicine, while disability and inclusion appear as subsidiaries and belong to clusters related to social disciplines, Figure 4:

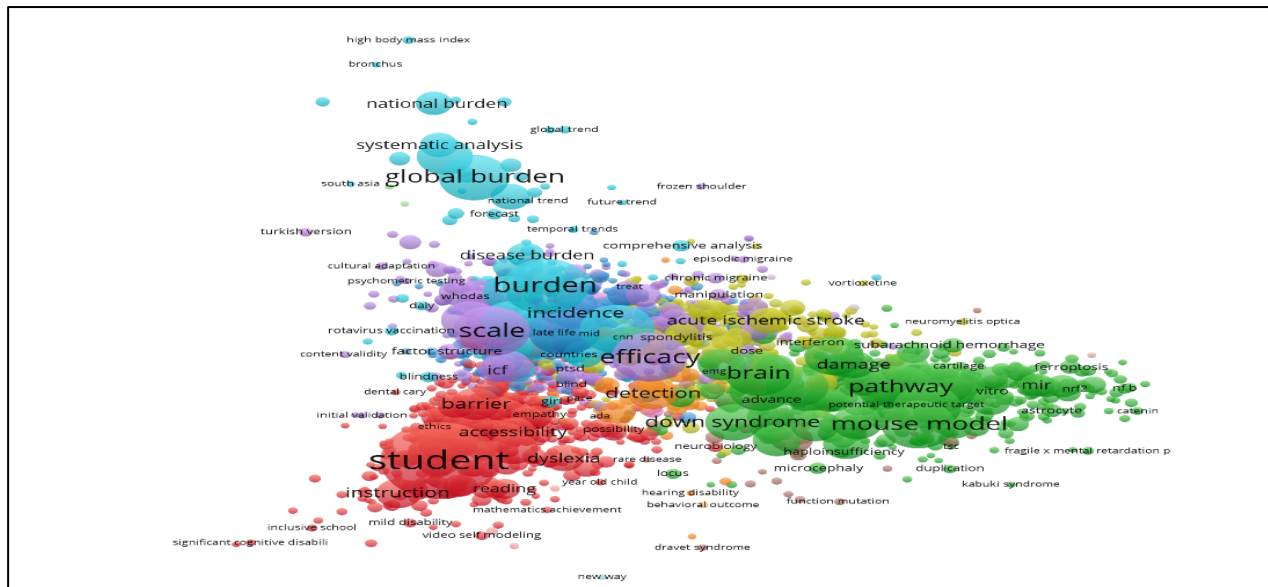


Figure 4. Knowledge map generated using the keywords “models of disability.”

Source: VOSviewer.

Below is the knowledge heatmap, which shows the dynamics of the links of the revealed terms related to the keywords. One can observe the clear connection and interconnection of the social and medical domains, indicating a clear interpenetration of the medical and social models of disability, the specialized literature having a clear preponderance in the sense of the medical model of disability, Figure 5:

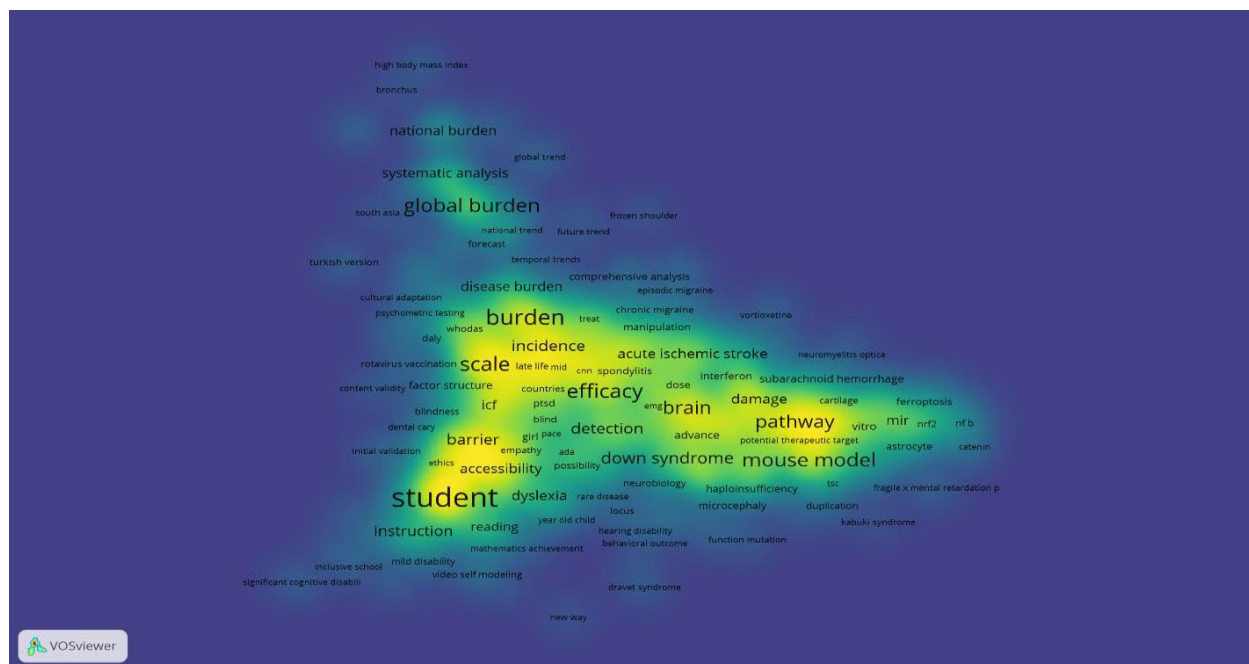


Figure 5. Knowledge heatmap generated using the keywords “models of disability.”

Source: VOSviewer.

A clear connection and interconnection between the social and medical fields can be observed, indicating an intertwining of the medical and social models of disability, with the literature clearly favoring the medical model.

Discussions

Although many models of disability have been developed over time by researchers in the field, only two major models tend to remain dominant in terms of society's ideology, namely the (individualized) medical model and the social model of disability. The other models of disability are derived from these two main models, attempting to optimize society's overall view of people with disabilities. As such, the medical model views disability as a deficit or pathology that lies within the individual and for which he or she is responsible, while the social model attempts to reframe disability as an experience that has been and is constructed by society, shaped by barriers, and sees these as one of the main problems (Stephen, 2012; Krantz, 2009).

The analysis carried out in this study showed the keywords that emerged and are closely related to social models of disability are small, subsidiary to large clusters, and refer to "*accessibility*", "*barriers*", "*ICF*", or "*cultural adaptation*". The results clearly show that in the last 24 years, the scientific literature has been debating the issue of disability quite intensely, and in recent times, there seems to be a publishing "boom", which is encouraging. Although interest in publishing in disability-related fields is growing, most of the fields in which publications are published are still seen through the medical spectrum of looking at the overall situation, the first three fields being purely medical: rehabilitation, with 12,245 publications; clinical neurology, with 9,790 publications; and neurological sciences, with 8,151 publications.

The countries that invest the most in research in this field are the United States of America, with 31,578 publications, followed by England with 8,446 publications, and China with 7,690 publications; these countries publish a cumulative number of 47,714.

One of the reasons why the medical model of disability is predominant is because it has its roots in traditions that have become ingrained in the social mindset over time, these being predominantly medical or religious in nature, considering disability to be a physiological or psychological anomaly of the person with disabilities (Barnes 1996; Finkelstein 1980). According to this model, disability is a deviation from the normal functioning of the body, of the organism, which requires diagnosis, treatment, or management, operations usually and preferably performed by health professionals (Butler & Parr 1999). This is revealed by the fact that the largest clusters that emerged from the analysis were those related to education "student", "efficiency", "pathway", "burden", or "global burden". All these are closely related to terms that represent diseases such as "Down syndrome", "disease burden", "damage", "ischemic stroke", etc.

There are also some terms, such as "mouse model", a term related to assistive technologies. We consider it to be related to the engineering field of disability, trying to fix the problem, also belonging to the medical model, because it is related to a series of deficiencies. This type of approach limits itself to viewing illness as a physiological and psychological anomaly; together with other similar newer models, it tends to emphasize pathologies, functional limitations of the body, and the need to cure people with disabilities (Heyer, 2007; Sheldon, 2001).

As mentioned earlier, the social model does not deny the validity of the medical model, but only its rigidity, because medical interventions performed on people with disabilities improve their quality of life in many cases (Oliver, 1990; Heyer, 2007).

The social model distinguishes between impairment, disability, and handicap, social exclusion, in whole or in part, or discrimination and stigmatization. The stigmatization of disabled

persons is often the result from the spectrum of barriers they encounter, arguing that people with impairments are not disabled because of their impairments, but because of an inaccessible society that creates discriminatory situations, with handicap being the result of society's failure to see the differences between disability and these situations (UPIAS, 1976). Therefore, poor infrastructure, lack of interpreters where needed, inflexible hiring practices that focus on skills without considering many of the needs of these individuals, and stigmatizing attitudes in the workplace create or contribute to the marginalization of people with disabilities, which can result in social exclusion (Anton & Deselnicu, 2025; Oliver, 1990).

Conclusions

This paper attempts to review the literature on models' disability in order to ascertain the current state of the scientific literature in this field and to observe the direction that researchers in this field are taking regarding disability perception. To create a complex and comprehensive picture of the concepts analyzed, after reviewing the main models of disability, the authors analyzed the scientific literature in order to observe key trends in this field, the countries that publish the most, etc. To observe these perceptions, a bibliometric and scientometric analysis was performed using a series of keywords through which, with the help of Web of Science-Data Core Collection, we attempted to obtain relevant information and analysis methods, followed by the creation of knowledge maps in VOSviewer to analyze this data.

The bibliometric and scientometric research revealed important information regarding society's view of people with disabilities, that research in this field is predominantly focused on solving the medical problems of people with disabilities, helping them to achieve a normal standard. Most of the fields in which studies related to disability models are published are medical fields, such as clinical neurology or rehabilitation.

A high number of publications (79,807) in the field were found in the Web of Science Core Collection database. The scientific literature indicates that interest in this area has been steadily increasing since 2001, with a spike in recent years. The countries that publish the most are the United States of America, England, and China, with 7,690 publications; these countries publish a cumulative number of 47,714, representing 59.9% of all publications in this field.

The individualized medical model of disability is widely used in scientific literature; most articles are published in scientific fields such as neurology or rehabilitation, with a fairly large difference between them, the main fields being rehabilitation, followed by clinical neurology and neurological sciences. This validates the hypothesis that in the scientific world, the medical model is still the one approached by most scientific articles. Special education is the first social is only sixth place. Even if the perceptions are mixed, the clear connection and interconnection of the medical and social domains can be observed, indicating a clear favoring of the medical model of disability.

Some limitations of the study are the underrepresentation of regional, non-English, and emerging journals. The keyword strategy can be improved to fine-tune the results.

References

- Ahmed, N. (2020). *Is the ivory tower wheelchair accessible? What are the barriers and enablers to the employment of disabled academics and what theoretical frameworks can be adopted to understand them?* (Doctoral dissertation, Queen Mary University of London).
- Albrecht, G. L. (1992). *The disability business: Rehabilitation in America*. Sage.

- Anton, M. I., & Deselnicu, D. C. (2025). Workers with disabilities: Context and trends in international research. In *International Conference of Management and Industrial Engineering* (Vol. 12, pp. 361-366).
- Anton, M. I., Cassar, V., & Deselnicu, D. C. (2025). Methods of Coping and Response of Vulnerable Personnel to the Mistreatment Experienced in the Labor Market. In *Proceedings of the International Conference on Business Excellence* (Vol. 19, No. 1, pp. 3637-3648). Sciendo.
- Barnes, C. (1996). Theories of disability and the origins of the oppression of disabled people in Western society. In L. Barton (Ed.), *Disability and society: Emerging issues and insights* (pp. 43–60). Longman.
- Oliver, M. (1997). *Disability studies: Past, present and future* (pp. ix-xiv). L. Barton (Ed.). Leeds: Disability Press.
- Braddock, D. L., & Parish, S. L. (2001). An institutional history of disability. In G. L. Albrecht, K. Seelman, & M. Bury (Eds.), *Handbook of disability studies*. Sage.
- Brisenden, S. (1986). Independent living and the medical model of disability. *Disability, Handicap & Society*, 1(2), 173–178.
- Butler, R., & Parr, H. (1999). *Mind and body spaces: Geographies of illness, impairment and disability*. Routledge.
- Deselnicu, D. C., Barbu, A., & Anton, M. I. (2024). Discrimination Against Vulnerable Personnel in the Workplace. In *Proceedings of the International Conference on Business Excellence* (Vol. 18, No. 1, pp. 1007-1017). Sciendo.
- Eck, N. J. van, & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84, 523–538.
- Finkelstein, V. (1980). *Attitudes and disabled people*. World Rehabilitation Fund / World Health Organization.
- Finkelstein, V. (2001). The social model repossessed. University of Leeds, Centre for Disability Studies.
- Ford, F. A. (1999). *Modeling the environment: An introduction to system dynamics models of environmental systems*. Island Press.
- Haffter, C. (1968). The changeling: History and psychodynamics of attitudes to handicapped children in European folklore. *Journal of the History of the Behavioral Sciences*, 4(1), 55–61.
- Harrison-Obi, C. (2019). *Protection of persons with disability under international law: Implications for workers with disability in Nigeria* (LL.M thesis, Nnamdi Azikiwe University).
- Heyer, K. (2007). A disability lens on socio-legal research: Reading rights of inclusion from a disability studies perspective. *Law & Social Inquiry*, 32(2), 261–293.
- Krantz, O. (2009). *Social construction of technical aids: Personal meaning and interactional effects of disability and assistive devices in everyday life* (Doctoral thesis, Lund University).
- Molyneux, C. (2021). *Disabled people, work, and small-medium-size enterprises (SMEs)* (Doctoral thesis, Lancaster University).
- Oliver, M. (1990). The politics of disablement—New social movements. In *The politics of disablement* (pp. 112-131). London: Macmillan Education UK.
- Oliver, M. (2017). Defining impairment and disability: Issues at stake. In *Disability and equality law* (pp. 3-18). Routledge.

- Pelka, F. (2012). *What we have done: An oral history of the disability rights movement*. University of Massachusetts Press.
- Pope, K. S. (2005). Disability and accessibility in psychology: Three major barriers. *Ethics & Behavior*, 15(2), 103–106.
- Pritchard, A. (1969). Statistical bibliography or bibliometrics. *Journal of Documentation*, 25, 348–349.
- Rezachevici, C. (2006). Punishment with Vlad Țepeș: Punishments in Europe—Common and differentiating traits. *Journal of Dracula Studies*, 8(1), 4–?
- Richard, R. (2004). *Disabling imagery? A teaching guide to disability and moving image media*. Disability Equality in Education.
- Sahu, K. K., & Sahu, S. (2015). Attitudinal barrier experienced by people with disabilities. *Journal of Disability Studies*, 1(2), 53–54.
- Sheldon, A. (2001). *Disabled people and communication systems in the twenty-first century* (Doctoral thesis, University of Leeds).
- Smart, J. F. (2009). The power of models of disability. *Journal of Rehabilitation*, 75(2), 3–11.
- Stephen, C. D. (2012). *Towards economic empowerment for disabled people: Exploring the boundaries of the social model of disability in Kenya and India* (Doctoral thesis, University of Birmingham).
- Swain, J., Finkelstein, V., French, S., & Oliver, M. (2014). *Disabling barriers—Enabling environments* (3rd ed.). Sage.
- Union of the Physically Impaired Against Segregation (UPIAS) & Disability Alliance. (1976). *Fundamental principles of disability*. UPIAS / Disability Alliance.