

# **Life Proposes, Disability Disposes: An Overview on the Models of Disability with Special Reference to WHO Conceptual Models**

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## **Abstract**

This paper aims to review and describe the models of disability i.e. the medical and the social model, the international classification of impairments, disabilities, and handicaps (ICIDH), as well as the International classification of functioning, disability, and health (ICIDH-2 or ICF). The terminology used was also the subject of review due to a lack of clarity about usage. After an in-depth literature review, it was determined that two terms are more widely used in journals, books and government documentation, namely 'disabled people' and 'people with disabilities'. The WHO and the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) definitions are accepted worldwide because they address and acknowledge the issues of disabled people. This article sheds light on the detailed conceptual framework of the ICIDH & ICF and the acceptance of ICF as the main disability guide at the global level. The applications of these models definitely help in understanding the health phenomenon called 'disability' and explain the paramount relationship between disabled people and society as a whole. This could be a 'handbook' for people at different levels in any organization to understand and be aware of different aspects of disability.

**Keywords:** disability, medical model, social model, ICIDH, ICF

## **Introduction**

We live in a world in denial, where people are discriminated against in all walks of life regardless of their race, religion, gender, disability, etc. The irony of life is that the world still denies the existence of such realistic facts. Unlike developed countries, disability has been neglected for a long time in many third world countries. Disabled people are not the main 'actors' in real life, rather they are portrayed as 'other', 'evil' or an 'issue',

whereby the word ‘disability’ is synonymous with the word ‘failure’ (Marks 1997). Ability and disability are complex and multi-factorial concepts which are difficult to explain and on a scale of fitness occupy a position between ‘illness’ and ‘being healthy’ (Marks 1997). “Although disability can be attributed to the impairment or physical/mental outcome caused by a medical condition, it is also a social construct that results from the social and physical environment in which a person lives their life” (Altman 2014).

Altman (2014) in her paper explains the cycle of disability. It starts as a process, which can occur for many reasons such as by birth or accident. She further explains that the afflicted condition may or may not leave a physical, mental or emotional impairment on an individual (permanent or temporary), but that it becomes the personality trait of that individual (active or residual impairment due to disease, injury, congenital accident or from birth) (Altman 2014). On the basis of the same conceptual belief, Bickenbach et al. (1999) explains that disability is not restricted to the ‘physical’ or ‘mental’ well-being of an individual, but it is also an integrated collection of intrinsic and extrinsic factors i.e. behaviour, conditions, etc., many of which may have originated from our society.

The study of disability is not restricted to any discipline of research. It can be argued to be ‘multidisciplinary’ because it provides remarkable associations with philosophy, sociology, political science, law, special education, management, etc. In their research, Evans and MacNaughton (2004) highlighted the interdisciplinary-multidisciplinary concept by stating the following: "Interdisciplinary is perhaps easier to claim than it is to demonstrate, and putatively interdisciplinary work frequently turns out to be merely multidisciplinary, in the sense of involving relatively disconnected contributions from different disciplines-contributions which, taken in isolation, exhibit no real trace of contact with any other discipline beyond their own". Winance (2016) confirms that disability research has grown considerably in the last 40 years, either into disability studies or merged into cross disciplinary studies.

The objective of this article is to provide insights into the different models of disability i.e. the social and the medical model and also to provide an understanding of the World Health Organization’s conceptual models (ICIDH and ICF) which are the basis for the evaluation, assessment and treatment of diseases and disorders.

The article begins with an introduction to disability, followed by a discussion on the comparative terminology used worldwide for the word ‘disability’. This includes a discussion regarding the use of the accepted and legal definition of disability quoted from WHO, UNCRPD and Hungarian legislation. Finally, a detailed literature review follows of the models of disability and the conceptual ICIDH and ICF models. This literature review is part of a planned and comprehensive research project in Hungary. This avant-garde study is expected to provide crucial contributions for the professional inclusion and integration of disabled people. The dearth of literature and the lack of awareness of disability also motivated the authors to add valuable insights and bridge the gap between reality and practice.

## **Definitions of disability**

Prior to discussing the various definitions of disability, it would be appropriate to establish important terminologies used worldwide to address the issue of the 'World's largest minority' (United Nations 2006). Every country has a different legislative approach to defining, identifying and treating disability. There are some common terms used by people all over the world such as, 'handicapped people', 'people with disabilities', 'disabled people', 'physically or mentally challenged', etc.

The commonly used terms within the context of Hungarian legislation are 'disabled persons', 'persons with disabilities', 'people with intellectual disabilities', 'people with altered working capacity' or 'persons with changed working capacity'. The usage depends on the ministry involved (Open Society Institute 2005; NORSA).

In the United Kingdom the correct term 'disabled people' is used, whereas in the United States of America more emphasis is given to 'people with disabilities', and in India to 'persons with disabilities' or 'disabled people' (Erkilic 2011; Mitra and Sambamoorthi 2006).

Kuppers (2010) explains that terms like crippled, retard, spuz had negative connotations and that at beginning of the 21st century terminology began to be more commonly used that was more respectful, namely 'people with disabilities' or 'disabled people'.

Morris (2001) shares her critical views on disability in her paper, entitled "Impairment and Disability: Constructing an Ethics of Care That Promotes Human Rights", and prefers the use of the term 'disabled people' over that of 'people with disabilities'. She also criticises the ideology of disabled people in Britain, where 'disability' refers to discriminating, social rejection and attitudinal obstacles and not to the 'impairment' within the body. There is therefore a difference between impairment (an individual's deformity or disorder) and disability (attitudinal and access issues). This can be further explained with an example, "My impairment is the fact that I can't walk; my disability is the fact that the bus company only purchases inaccessible buses." or, "My impairment is the fact that I can't speak; my disability is the fact that you won't take the time and trouble to learn how to communicate with me." (Morris 2001).

This issue is even mentioned in the ICF manual with regards to concerns over the use of terminology with which to address people who have restrictions or limitations in their body functions and behaviour (WHO 2001). The World Health Organisation leaves this to 'community in discussion' in this article to decide which terminology should be used, be it 'disabled people', 'people with disabilities' or any other name, as they have the right to choose for themselves with which idiom to be addressed. The phrase 'disabled people' is more acceptable than "people with disabilities" because "disability" refers to a multidimensional occurrence which has evolved from people and their surroundings (WHO 2001). The United Nations used the word 'person with disabilities' in their Convention on the Rights of Persons with Disabilities (U. N. 2006). In 2015, the United

Nations, in its report entitled, 'Improvement of disability data and statistics: objectives and challenges', noted that there is a problem with data collection due to a 'lack of a uniform definition and understanding of disability among countries' which is a big challenge(U. N. 2015).

Many organizations and health care institutions all over the world have different methods and terminology for evaluating, assessing, and classifying diseases and disorders, the results of which can determine further treatment and the payment options offered to people (Simeonsson et al. 2000).It is therefore important to have a definition or universal terminology for diseases and disorders in order to create a transparent and systematic form of documentation that is accepted and recognized worldwide, and not just a well-defined monetary structure for treatment.

A group of disabled people, the Union of the Physically Impaired Against Segregation (UPIAS), defined disability as being: "The disadvantage or restriction of activity caused by a contemporary social organization which takes no or little account of people who have physical impairments and thus excludes them from participation in the mainstream of social activities" (UPIAS 1976). In contrast, the definition of disability under the Equality Act 2010 (Equality Act 2010) is: 'A person (P) has a disability if (a) P has a physical or mental impairment, and (b) the impairment has a substantial and long-term adverse effect on P's ability to carry out normal day-to-day activities.'

According to Americans with Disabilities Act 1990 (42 U.S. Code), the term 'disability' means, with respect to an individual:

- A. A physical or mental impairment that substantially limits one or more of the major life activities of such an individual;
- B. A record of such an impairment (An individual meets the requirement of "being regarded as having such an impairment" if the individual establishes that he or she has been subjected to an action prohibited under this chapter because of an actual or perceived physical or mental impairment whether or not the impairment limits or is perceived to limit a major life activity);
- C. Being regarded as having such an impairment.

Hungarian legislature had to make changes to its definition of disability so that it included traits of the social model. The definition of a person living with a disability, as per Chapter 1, Section 4 of the Act, is: 'A person living with a disability is anyone who is to a significant extent or not entirely in possession of sensory – particularly sight, hearing, locomotor or intellectual functions, or who is substantially restricted in their communication and who is thereby placed at a permanent disadvantage regarding active participation in the life of society' (Act XXVI 1998). The UN committee highlighted some minor loopholes in the Act to ensure that the Hungarian government policy would be in full compliance with the UN CRPD convention. They did so because the Disability Act was based on the medical model and that certain areas of disability were not covered e.g. psychiatric patients with (long-term) mental impairment were not included. In April 2013, the Government of Hungary filed an amendment to Act XXVI of 1998 regarding the

definition of disabled people which came into effect from September 2013. (Act XXVI 1998; Balog 2013; NORSA, n.d. and European Parliament 2013).

Act CXCI of 2011 on benefits for persons with changed working capacity and amendments of certain Acts, which came into force on 1st January 2012, states: "Persons eligible for benefits for persons with changed working capacity are those whose state of health i.e. the state of a person's physical, mental and social well-being that occurred due to illnesses or injuries or that can be identified as permanent or terminal setbacks caused by congenital abnormalities, is assessed during a comprehensive assessment by the rehabilitation authority as being 60 per cent or less (hereinafter referred to as 'person with changed working capacity' or 'disabled person.'") (Act CXCI 2011; NORSA).

The United Nations Convention on the Rights of Persons with Disabilities (UN CRPD) does not provide a 'closed' definition as it considers disability as an 'evolving concept' (WHO 2014). Article 1 of the UNCRPD defines persons with disabilities as "those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others" (UN 2006). During the drafting of the comprehensive definition of disability, it was initially decided not to have any definition at all. Quinn (2007), cited in Kothari (2010), explains that it was not advisable to have a definition of disability because it was pointed out that people can be discriminated against on the 'grounds of disability' in three different manners: able people who have been treated for a disease or disorder and who do not have it anymore and who are assumed to still have a disability; people who are currently non-disabled but who may or may not develop a disability in the future but who are susceptible to disability; and people who are not disabled but are associated with other disabled people.

On the basis of the above, it is clear that a universal and unanimous definition of disability needed to be found to avoid chaos and to bring transparency to the whole disability movement. According to Leonardi, et al. (2006), the definition of disability needed to take into consideration the basic difference between the 'objective' description from an individual's perspective on their experience with their personal limitations and the 'subjective' appraisals of others. The definition needed to embody approaches to disability, showcase the robust phenomenon of disability, affirm an individual's health condition, but also address extrinsic factors in the settlement and acceptance of such social concern (Leonardi et al. 2006). Therefore, "Defining disability as an interaction means that "disability" is not an attribute of a person. Progress on improving social participation can be made by addressing the barriers which hinder persons with disabilities in their day to day lives." (WHO 2011).

To summarise, the universal definition of disability embodies two characteristics: an individual's mental and physical traits; and the personal and social constraints attached to those traits, such as is incorporated in WHO manuals and legislature in the UK, USA, Hungary, etc.

## **Models of Disability**

Mankind is dependent on models and theories to be able to understand human behaviour and anatomy. Models of disability have an important role to play in the drafting of procedural legislation, as well for research into , and the understanding of, the complexities of the human anatomy (Llewellyn and Hogan 2000). Llewellyn and Hogan (2010), share the viewpoint of many theorists who feel that models of disability are different in 'real life'. They go on to state that this may be due to the inability to understand the usage of the model in question and the ability to expand our thinking in the field of disability, which could be starting point of many future postulates.

There are several models of disability based on the differing approaches towards life sciences, politics, society and other diverse fields. Table 1 provides a summary of the different types of models in relation to disability.

Table1: Different types of models of disability

| <b>Types of Disability Models</b>  | <b>Characteristics Feature</b>  |
|--|---|
| Medical Model or Individual Model or Biological-Inferiority or Functional-Limitation Model | <ul style="list-style-type: none"> <li>- Results from an individual person's physical or mental limitations.</li> <li>- Management of the disability is aimed at a "cure".</li> </ul>   |
| Social Model or Minority-Group Model   | <ul style="list-style-type: none"> <li>- Consequence of environmental, social and attitudinal factors.</li> <li>- Effect of disability movement initiated by disabled people.</li> </ul>  |
| Charity or Tragedy Model   | <ul style="list-style-type: none"> <li>- Depicts disabled people as victims of circumstance, deserving of pity.</li> <li>- Views disabled people as charitable cases.</li> <li>- Patronizing effect on disabled people.</li> <li>- Widens the gap between disabled people and society.</li> </ul> |
| Religious or Moral Model   | <ul style="list-style-type: none"> <li>- Historically the oldest and is less prevalent today.</li> <li>- Based on religious and cultural beliefs.</li> <li>- Disability associated with guilt, sin and shame.</li> </ul>  |
| Expert or Professional Model   | <ul style="list-style-type: none"> <li>- Offshoot of the medical model.</li> <li>- Authoritarian style i.e. over-active service provider and passive client.</li> </ul>   |
| Rights-Based Model   | <ul style="list-style-type: none"> <li>- Conceptualized as a socio-political construct within a rights-based discourse.</li> <li>- Not driven by compassion, but by dignity and freedom.</li> </ul>   |
| Economic Model   | <ul style="list-style-type: none"> <li>- Defined by a person's inability to participate in work.</li> </ul>   |

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|                              |   |
|------------------------------|---|
|                              | - Used primarily by policy makers to assess the distribution of benefits.   |
| Rehabilitation Model         | <ul style="list-style-type: none"> <li>- Similar to the medical model.</li> <li>- Disability as a deficiency that must be fixed by a rehabilitation professional or other helping professionals.</li> </ul> |
| Empowering or Customer Model | <ul style="list-style-type: none"> <li>- Exact opposite of the expert model.</li> <li>- Expert viewed as a service provider to the disabled client.</li> </ul>  |

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*Source: Own construction based on MDRC, n. d.; Disabled World, n. d.; WHO 1980; WHO 2001; WHO 2014.*

Louhiala (2009), in her paper entitled 'Philosophy Meets Disability', considers medical and social models as two extreme and important models of disability, whereby the medical model is the 'ingrained' personality of an individual which is physical in nature, and whereby the social model is where disabled people have isolated themselves from society through 'self-imposed exile', which expresses itself in predominantly pessimistic social factors such as negative attitudes.

There is a discussion on which model is the dominant and important one, but there is no consensus. The dilemma is even mentioned in the UNCRPD report: "The charity approach is the oldest of the four, followed by the medical approach. The social and human rights approaches are more recent. Yet, all continue to this day. In spite of the adoption of the Convention, the charity and medical models are still very prevalent—even among the human rights community" (WHO 2014). A brief outline of the medical and social models follows, which form the building blocks of the conceptual ICF and ICIDH models.

### **Medical Model**

In order to understand and define the concept of disability, the medical model is used as the starting point or the dominant model for research. The medical model is based on the notion that the human body suffers from disability for many reasons, be it disease, accident or any other health related issues, and that this can be treated or rehabilitated (Mitra and Sambamoorthi 2006).

The starting point of the medical model is to focus energy on changing the world of a minority group who cannot fit into our society, rather than restructuring or re-establishing our environment to accommodate those people who need adjustments due to their physical and mental incapability (Marks 1997). Llewellyn and Hogan (2010) commented on Marks' paradigm by saying that the overall picture is that the human being is flexible and 'alterable' while society is fixed and unalterable. The disabled person is therefore expected to adapt to the requirements of society, not vice versa. The 'achievements' or 'qualities' of a disabled person are applauded if they overcome their disability by doing something remarkable which is not possible because of their disability (Johnston 1994).

## Social Model

The social model, which includes socio-political features, not only brought about changes in the interpretation of the medical model, but also challenged the foundations of the medical model where by disabled people were addressed as socially oppressed and which holds society responsible for the oppression of that minority (Reddy 2011). Hahn (1986) writes, "This stems from the failure of a structured social environment to adjust to the needs and aspirations of citizens with disabilities rather than from the inability of a disabled individual to adapt to the demands of society". This can be explained by taking an example of a man who uses crutches and cannot board a bus due to the physical structure of the bus. The local authorities have to find a way to make changes in the structure of the bus so that it can be accessed by everyone, and not find fault in the man's legs and crutches. Many disabled individuals maintain the viewpoint that society's opinion of their disability is more de-motivating than their incapability and that the same society, which is obsessed with their disability reminds them that they have some kind of deformity.

The social definition of disability is conceptualised by Oliver (1995), "the disadvantage or restriction of activity caused by a contemporary social organization which takes no account of people who have physical impairments and learning difficulties and thus excludes them from mainstream social activities".

There has been a conceptual movement initiated by researchers, social workers and people from disabled communities to focus on creating a social community without barriers and which encourages policies that do not discriminate against or raise obstacles (institutional, economic, attitudinal and environmental) to the survival of disabled people (Erkilic 2011).

The social concept of disability, like two sides of a coin, has contrasting and realistic foundations i.e. biology and society: one which emphasizes the characteristics of a disabled individual (body distinctiveness) and the other being the social interpretation of prejudice and interdiction.

Anthropologists are ready to take up this challenge of expanding their knowledge because they feel that ethnography can be an effective and reliable tool for disability studies. It is their understanding that there are further possible avenues of research within the context of the disability-impairment relationship if biomedical concepts and social theories are applied together (Mehrotra 2012).

On the whole, the medical and social models have been well accepted, but neither of them is adequate in relation to disability. A successful model of disability would be one which combines the different perspectives of both models into a new model which can be accepted by its users, disabled communities and governments alike (WHO 2002).

## ICIDH: International Classification of Impairments, Disabilities, and Handicaps

The International Classification of Impairments, Disabilities, and Handicaps (ICIDH), an initiative of the World Health Organisation (WHO), was first published in 1980. The classification sought to create a conceptual framework for the embodiment of the relationship between the body, an individual's disability and an individual's standing in society in relation to long-term diseases, injuries and disorders (WHO 1980).

The ICIDH provides support and addresses the challenges in the day-to-day lives of disabled people, as well as seeks to understand the problems & changes in relation to impairment, disability and handicap. These three form the basic pillars of ICIDH, and in conjunction with the classification, helps to give a descriptive assessment of disabled people in their given surroundings (WHO 1980).

The overall disability of a person is compromised because our social environment does not assess the integration of societal barriers and other related environmental factors because it is suggested, according to ICIDH, that our social environment is rigid (Chopra, Couper and Herrman 2002).

The thinking behind ICIDH provides understanding in three areas. Firstly, in terms of the compilation of the theoretical structure through the introduction of three notions i.e. impairment, disability and handicap (see Figure 1), by which to understand the effects of diseases and disorders on the human body. Secondly, by proposing a classification system for the distinct levels of the effects of diseases. Thirdly, in terms of soliciting intellectual structures which interlink the concepts of impairment, disability and handicap (Badley 1993).

Figure 1: ICIDH



Source: WHO 1980

The ICIDH manual broadly contains three different classifications which are specific and autonomous (see Table 2) (WHO, 1980, pp. 13-14; Badley, 1993).

Table 2: Three pillars of the ICIDH classification

| <b>Impairment (I)</b>  | <b>Disability (D)</b>  | <b>Handicap (H)</b>  |
|--|--|--|
| Impairments (I code), concerned with abnormalities of body structure and appearance and with organ or system function) resulting from any cause; in principle, impairments represent disturbances at the organ level | Disabilities (D code), reflecting the consequences of impairment in terms of functional performance and activity by the individual; disabilities thus represent disturbances at the level of the person. | Handicaps (H code), concerned with the disadvantages experienced by the individual as a result of impairments and disabilities; handicaps thus reflect interaction with and adaptation to the individual's surroundings. |

*Source: Authors based on WHO 1980 ;Badley 1993*

These three ICIDH pillars represent psychological, physiological and anatomical problems. However, even though each concept is different, there is some kind of overlap.

The concepts laid out in the ICIDH are essentially helpful and obligatory criteria for creating policies, particularly in health related disciplines. The ICIDH is a classification which specifically deals with the health related domain, but with a scope of influence that includes population surveys, demographics, city planning and development, alternative medical treatments, the organisation of inter-departmental communications, policy writing, etc. (WHO 1980).

The ICIDH has attracted the world's attention by providing a detailed classification of disability, which brings together the concerns of disabled people. However, it also has its shortcomings and limitations. In their findings, Simeonsson et al. (2000), divided the limitations of ICIDH into three groups - conceptual, taxonomic and practical issues.

Critics of disability have also raised concerns over the ICIDH manual because it does not clearly highlight the social aspects of a given environment and may also be interpreted as advocating the concept of "the medicalization of disablement"(WHO 1980). Gayle-Geddes (2015), points out in her research that the ICIDH approach inclines towards the medical model and is individually centred; it leaves behind the divide between the abilities of disabled people and their social environment.

## **ICF: International Classification of Functioning, Disability, and Health (ICIDH-2)**

In 1993, the World Health Organisation (WHO) initiated the process of revising ICIDH to incorporate three main groups - mental health, children and the environment. There were two drafts of ICIDH-2, namely the "alpha draft" and the "beta-1 draft", which were presented and criticized before the final draft i.e. ICF, was completed, approved and introduced in 2001 (Bickenbach et al. 1999). The ICIDH-2, or ICF classification (revised version of ICIDH), provides a consolidated and well-structured 'dynamic system'(a

change in any one of which is likely to have impacts on the others) for the better understanding of health related causes. The results and explanations were applauded for their neutral language (if not positive) in comparison to the ICIDH model. For example, 'impairment' was replaced by 'body structure and function', 'disability' addressed as 'activity' and 'handicap' re-introduced as 'participation'. The new classification also saw the introduction of 'contextual factors', including sub components like 'environmental' and 'personal factors' (Rosenbaum 2015).

It can therefore be interpreted that ICF or ICIDH-2 was successful in bridging the gap between the social and the medical models, resulting in a bio-psycho-social concept, which unites biological, social and individual aspects into one major universal human phenomenon (Kyrkou 2016).

The reason for the development of ICF was that there was a need to overcome the shortcomings of the 'one way interaction' framework of ICIDH, which could not explain the role of environmental factors in relation to disability. The ICF framework provides a classification for the assessment of disability (based on the "biopsychosocial model"), which takes into consideration the importance of social and environmental factors in the disability assessment procedure and the design of future policies (Chopra, Couper and Herrman 2002; WHO 2001)

The aim of the revised concept was to provide a common understanding and system to help people from various disciplines and sectors (medicine, rehabilitation studies, psychiatry, psychology, education, social work, etc.) to spread awareness of health or health related problems all over the world. Like ICIDH, the concepts within ICF are inter-related and are aimed at devising an understandable and practical language that can benefit users such as health care practitioners, scientific researchers, policy makers and people from different backgrounds in life, including disabled people. The practical benefit of ICF helps in the evaluation and the measurement of disability in medical and social policy scenarios.

ICF can be explained as being two parts – individual and social - of a conceptual body, each part being subdivided into two components (which can be expressed in both negative and positive terms) as follows (WHO 2001):

#### Part 1: Functioning and Disability

- (a) Body Functions and Structures: The body component comprises two classifications, one for functions of body systems, and one for the body structures. The chapters in both classifications are organized according to the body systems.
- (b) Activities and Participation: The activities and participation component covers the complete range of domains denoting aspects of functioning from both an individual and a societal perspective.

#### Part 2: Contextual Factors

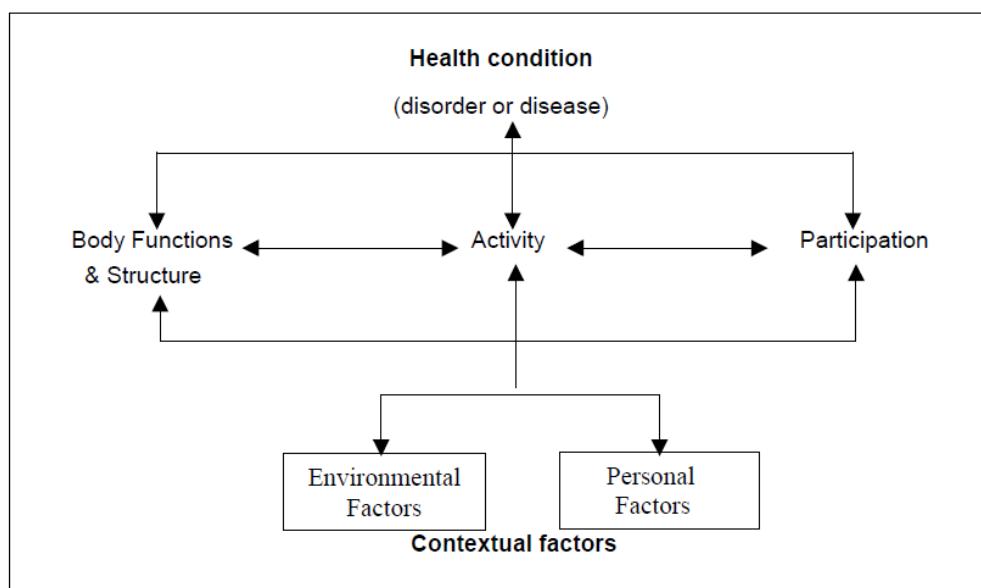
- (a) Environmental Factors: A list of environmental factors forms part of the contextual factors. Environmental factors have an impact on all components of

functioning and disability and are organized from the individual's most immediate environment to the general environment.

(b) Personal Factors: personal factors are a component of contextual factors, but not classified in ICIDH-2 because of the large social and cultural variance associated with them (See Figure 2).

Functioning as a 'common' term covers all the body functions, as well as activities and participation. Likewise, disability as a 'common' term refers to impairment, restrictions to participation and barriers to activity. Environmental factors in ICF are also mentioned which are inter-connected with all these concepts and describe the situations in which an individual lives (WHO 2001).

Figure 2. ICF MODEL



Source: WHO, 2001

The scope and influence of ICF does not only restrict itself to people with disabilities, but applies to all people. The use of ICF has been instrumental in many fields. For example, it is an important tool in statistics, qualitative research, social policy and educational research. The use of ICF, the universal framework for disability, helps to bring transparency, credibility and harmonisation by drafting universal definitions and setting accepted standards for classifications worldwide and as such, by sharing good practices with a wider network of countries, allows the sharing of innovative and cost-effective approaches (WHO 2011). It is also important to note that the definition of disability and the classification structure under ICF are also prevalent in legislation across the world and form important instruments for the disability movement.

In 2007, ICF revised its coverage of disabilities that are rooted in adolescent complexities and subsequently published ICF Children and Youth (ICF-CY). This was done in response to the criticism that the original ICIDH had not placed sufficient emphasis on children and youth (Simeonsson et al. 2000). The ICF-CY is an expanded

version of ICF which covers body functions and structures, activities and environmental standards in relation to infants, toddlers, children and adolescents (Kostanjsek 2011; WHO 2007).

The ICIDH ideology i.e. “consequence of disease” did not form the basis for ICF (ICIDH-2); ICF is more a reflection on the “components of health” (WHO 2001).

We live in a complex society and no one is perfect in today's competitive world. We are dependent on each other for our ‘needs’ & ‘wants’ irrespective of mental & physical abilities and disability studies not only explores individual constraints but also the social changes; working towards the cause of benefitting and integrating the entire population into one comprehensive association (Marks 1997).

## **Conclusion**

It can be concluded from this article that there are two criteria for evaluating disability. The first involves the individual's physical & mental state (medical), the second, people's attitudes and the physical environment (society). The medical and the social models have their own existence in socio-scientific disciplines; neither of them can be written off as obsolete models because they form the basis for future conceptual models. The integration of the social and the medical model has led to the development of a new ‘biopsychosocial model’ which covers various dimensions of biology, individual health and the social environment. The objective of the ICF is to provide a universal definition and classification of health and disability in a neutral language to the citizens of the world to overcome political, social and individual barriers.

Disability is not an insignificant issue; the well-being of disabled people is an important socio-political agenda point. Unless and until, the thought process of able-disabled people changes, or they start accepting the ‘world's largest minority’ into their system, the objectives of these models and legislation will not be accomplished. These models can therefore help us to define guidelines and descriptive procedures which include disabled people and which overcome the problems of marginalization and social exclusion. In this regard, this study could have been voluminous if there had been more published papers on the topic available.

The purpose of this review was, by highlighting the various dimensions of disability, to create a platform where globalization, international politics and demographics affect the rights of disabled people. There is a deliberate attempt through this article to provide information to users who are only familiar with the existence of disabled people in society, but have not been exposed to the very important basic concepts thereof. There could be two reasons for this, either there is not enough information available to them, or maybe they have not interacted with any disabled person. The phrase ‘necessity is the mother of invention’ stands out in this context because we learn and show an interest in certain things in life only when it is essential or we are faced with a dilemma. We tend to show no interest in diseases and disorders unless we are sick ourselves or someone in our family is afflicted. On the basis of the same ideology, the phrase ‘ignorance is bliss’

opens our eyes so that we no longer have an ignorant attitude towards disability and motivates us to be more open-minded about other people's existence in society irrespective of race, gender or disability.

Managers can use this article as a 'handbook' to broaden their knowledge in relation to disability and for developing and adopting an empathetic approach towards disabled people at work. The lack of disability awareness in many organisations still needs to be confronted. There is therefore a lot of scope for future studies into how to bridge the gap between society and work culture. The ICF model's environmental and personal factors can be further evaluated to gain access to issues pertaining to the work place. The objectives of concepts and models are not only to provide in-depth information about disability, but also to empower disabled people because they are also not up-to-date about their rights. Both disabled and able-bodied people need to re-think or deviate from stereotypical thought processes or create a new outlook towards disability for the 21st century.

## References

- ALTMAN, B. M., 2014. Definitions, concepts, and measures of disability. *Annals of Epidemiology* [online]. Elsevier Inc., **24**(1), 2-7, [accessed: 2016-07-29]. ISSN 1047-2797. Available at: <http://www.sciencedirect.com/science/article/pii/S1047279713004031>.
- BADLEY, E. M., 1993. An introduction to the concepts and classification of the international classification of impairments, disabilities and handicaps. *Disability and Rehabilitation*. **15**(4), 1-10. ISSN 1748-3107.
- BALOG, Z., 2013. The rights and equal opportunities for persons with disabilities 1998XXVI. amendment of Act, 2013 [pdf]. [accessed: 2016-05-14]. Available at:<http://www.parlament.hu/irom39/10746/10746.pdf>.
- BICKENBACH, J. E. et al., 1999. Models of disability, universalism and the international classification of impairments, disabilities and handicaps. *Social Science and Medicine* [online]. **48**, 1173–1187. Accessed: 2016-07-29]. ISSN0277-9536. Available at: <http://www.sciencedirect.com/science/article/pii/S0277953698004419>.
- CHOPRA, P., J. COUPER and H. HERRMAN, 2002. The assessment of disability in patients with psychotic disorders : an application of the ICIDH-2. *Aus New Zealand Psychiatry*. **36**(1), 127-132. ISSN 0004-8674.
- DISABLED WORLD, n. d. Disabled World: Disability News and Information. Available at: <http://www.disabled-world.com/definitions/disability-models.php>.
- ERKILIÇ, M., 2011. Conceptual challenges between universal design and disability in relation to the body , impairment , and the environment where does the issue of disability stand in the philosophy of UD ? *METU JFA*. **20**(2), 181-203. doi: 10.4305/METU.JFA.2011.2.9.

EUROPEAN PARLIAMENT, 2013. Country report on Hungary for the study on member state policies for children with disabilities.[pdf]. [accessed 2016-05-27]. Available at: [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/474424/IPOL-LIBE\\_ET\(2013\)474424\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/474424/IPOL-LIBE_ET(2013)474424_EN.pdf).

EVANS, H.M. and MacNAUGHTON J., 2004. Should medical humanities be a multidisciplinary or an interdisciplinary study? *Med Humanit. Journal.* Vol.30(1), pp.1-4. doi: 10.1136/jmh.2004.000143. ISSN1041-3545 (print).

GAYLE-GEDDES, A., 2015. *Disability and inequality: socioeconomic imperatives and public policy in Jamaica.* Palgrave Macmillan. ISBN 978-1-37-44925-2.

HAHN, H., 1986. Public support for rehabilitation programs: the analysis of US disability policy. *Disability, Handicap and Society,* 1(1), pp. 121-138. ISSN 0267-4645 (print).

HUNGARY. Act No. CXCI, 2011. Act CXCI of 2011 On allowances for persons with disabilities and the amendment of certain legislation. [pdf]. [accessed:2016-05-05]. Available at: <http://norsa.gov.hu/download/2/6d/80000/Act%20CXCI%20of%202011%20on%20allowances%20for%20persons%20with%20disabilities.pdf>.

HUNGARY. Act No. XXVI, 1998. Act No. XXVI. of 1998. On provision of the rights of persons living with disability and their equality of opportunity. [accessed: 2016-05-09]. Available at: <http://www.mezsinfo.hu/eng/p0x05m.htm>.

JOHNSTON,M., 1994. Models of disability. *The Psychologist*, 5, 205-212. ISSN 0952-8229.

KOSTANJSEK, N., 2011. Use of the international classification of functioning, disability and health (ICF) as a conceptual framework and common language for disability statistics and health information systems. *BMC Public Health* 2011. **11**(4). DOI: 10.1186/1471-2458-11-S4-S3.

KOTHARI, K., 2010. The UN convention on rights of persons with disabilities : an engine for law reform in India. [online]. *Economic and Political Weekly*. **45**(18), 65-72. [accessed: 2016-07-30]. ISSN 2349-8846. Available at: [http://www.jstor.org/stable/25664414?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/25664414?seq=1#page_scan_tab_contents).

KUPPERS, P., 2010. Disability and language Introduction. Profession 2010. *International classification of function.* Modern Language Association. 5,107-111. DOI:10.1632/prof.2010.2010.1.107.ISSN0740-6959.

KYRKOU, M. R., 2016. *International classification of function. Health care for people with intellectual and developmental disabilities across the lifespan.* Springer International Publishing. ISBN 978-3-319-18096-0.

LEONARDI, M. et al., 2006. The definition of disability: What is in the name? *The Lancet.* **368**(9543), 1219-1221. DOI: [http://dx.doi.org/10.1016/S0140-6736\(06\)69498-1](http://dx.doi.org/10.1016/S0140-6736(06)69498-1). ISSN 0140-6736.

- LLEWELLYN, A. and K. HOGAN, 2000. The use and abuse of models of disability. *Disability & Society*. **15**(1), 157-165. ISSN 0968-7599.
- LOUHIALA, P., 2009. Ethics: Philosophy meets disability. *Journal of Medical Ethics*, **35**(9), 570-572. Doi:10.1136/jme.2009.030684. ISSN 0306-6800.
- MARKS, D., 1997. Models of Disability. *Disability and Rehabilitation*, **19**(3), 85-91. ISSN 0963-8288 (Print).
- MEHROTRA, N., 2012. Methodological issues in disability research: an introduction. *Indian Anthropological Association* [online]. **42**(1), 1-10. [accessed: 2016-07-30]. Available at: [https://www.academia.edu/2241393/Methodological\\_Issues\\_in\\_Disability\\_Research\\_An\\_Introduction](https://www.academia.edu/2241393/Methodological_Issues_in_Disability_Research_An_Introduction).
- MITRA, S. and U. Sambamoorthi, 2006. Disability estimates in India: what the census and NSS tell us. *Economic and Political Weekly*. **41**(38), 4022-4026. ISSN 2349-8846.
- MORRIS, J., 2001. Impairment and disability: constructing an ethics of care that promotes human rights. *Impairment and Disability*. **16**(4), 1-16.
- MDRC, n. d. Michigan Disability Rights Coalition. Available at: <http://www.copower.org/leadership/models-of-disability>.
- NORSA, n.d. The National Office for Rehabilitation and Social Affairs, Hungary. www.http://norsa.gov.hu. Available at: <http://norsa.gov.hu/information-on-benefits-for-persons-with-changed-working-capacity>.
- OLIVER, M., 1995. Does special education have a role to play in the twenty first century? *REACH Journal of Special Needs Education in Ireland*. **8**(2), 67- 76. ISSN 0790-8695.
- OPEN SOCIETY INSTITUTE, 2005. *Rights of people with intellectual disabilities. Access to education and employment*. Monitoring Report. [pdf] Open Society Institute.[accessed: 2016-04-17]. Available at:[https://www.opensocietyfoundations.org/sites/default/files/hungary\\_0.pdf](https://www.opensocietyfoundations.org/sites/default/files/hungary_0.pdf).
- QUINN,G., 2007. Disability discrimination law in the European Union in H MEENAN (ed.), *Equality law in an enlarged European Union: Understanding the Article 13 Directive 236*. Cambridge. Cambridge University Press. ISBN 97-80521865-30-2. [accessed: 2016-04-22]. Available at: <http://www.ejil.org/pdfs/20/2/1806.pdf>.
- REDDY, C. R., 2011. From impairment to disability and beyond: critical explorations in disability studies. *Indian Sociological Society*. **60**(2), 287-306. Available at: <http://www.jstor.org/stable/23620921>.
- ROSENBAUM, P., 2015. Developmental disability in the 21 st century: New ideas for a new millennium. *Indian Journal of Cerebral Palsy*. **1**(1), 4-8. ISSN 2395-4264.
- SIMEONSSON, R. J. et al., 2000. Revision of the international classification of impairments, disabilities, and handicaps: developmental issues. *Journal of Clinical*

Epidemiology. 53(2), 113–124. DOI: 10.1016/S0895-4356(99)00133-X. ISSN 0895-4356.

UNITED KINGDOM. Equality Act, 2010. Equality Act 2010 , Chapter 15 [pdf]. [accessed:2016-05-31]. Available at: <[http://www.legislation.gov.uk/ukpga/2010/15/pdfs/ukpga\\_20100015\\_en.pdf](http://www.legislation.gov.uk/ukpga/2010/15/pdfs/ukpga_20100015_en.pdf).

UNITED NATIONS, 2006. Convention on the rights of persons with disabilities. General Assembly [online]. [accessed:2016-05-03] Available at: <http://www.un.org/disabilities/convention/conventionfull.shtml>. or <https://documents-dds-ny.un.org/doc/UNDOC/LTD/N06/645/30/PDF/N0664530.pdf?OpenElement>.

UNITED NATIONS, 2015. Conference of states parties to the convention on the rights of persons with disabilities. [pdf]Improvement of disability data and statistics: objectives and challenges'. [accessed: 2016-14-04]. Available at: [http://www.un.org/disabilities/documents/COP/cosp8\\_report\\_e.pdf](http://www.un.org/disabilities/documents/COP/cosp8_report_e.pdf).

UPIAS, 1976. *Fundamental principles of disability*, Union of the physically impaired against segregation, London. [online]. [accessed: 2016-04-22]. Available at: <http://disability-studies.leeds.ac.uk/files/library/UPIAS-fundamental-principles.pdf>.

USA Americans with Disabilities Act, 1990. Americans with Disabilities Act(1990)-ADA - 42 U.S. code chapter 126. [pdf]. [accessed: 02 May 2015]. Available at: <http://www.ada.gov/pubs/adastatute08.htm>.

WINANCE, M., 2016. Rethinking disability: lessons from the past, questions for the future. Contributions and limits of the social model, the sociology of science and technology, and the ethics of care. *European Journal of Disability Research/Revue*. 10(2), 99-110. ISSN: 1875-0672.

WORLD HEALTH ORGANIZATION, 1980. The international classification of impairments, disabilities and handicaps (ICIDH) WHO, Geneva [pdf]. [accessed: 2016-05-15]. Available at:< [http://apps.who.int/iris/bitstream/10665/41003/1/9241541261\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/41003/1/9241541261_eng.pdf).

WORLD HEALTH ORGANIZATION, 1999. Assessment, classification, epidemiology group. ICIDH-2, Beta-2, [pdf]. [accessed: 2016-05-15] Available at: [http://apps.who.int/iris/bitstream/10665/63832/1/WHO\\_HSC\\_ACE\\_99.1.pdf](http://apps.who.int/iris/bitstream/10665/63832/1/WHO_HSC_ACE_99.1.pdf).

WORLD HEALTH ORGANIZATION, 2001. International classification of functioning, disability and health (ICIDH-2), 2001. Final draft, full version.[pdf].Classification, Assessment, Surveys and Terminology Team, World Health Organisation, Geneva. [accessed: 2016-05-10]. Available at : <http://unstats.un.org/unsd/disability/pdfs/ac.81-b4.pdf>.

WORLD HEALTH ORGANISATION, 2002. Towards a common language for functioning, disability and health- ICF.[pdf]. [accessed: 15 May 2016]. World Health Organisation,

- Geneva. Available at:<http://www.who.int/classifications/icf/training/icfbeginnersguide.pdf>.
- WORLD HEALTH ORGANIZATION, 2007: International classification of functioning, disability and health - Children and Youth version (ICF-CY). [pdf]World Health Organization, Geneva. [accessed: 15 May 2016]. Available at : [http://apps.who.int/iris/bitstream/10665/43737/1/9789241547321\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/43737/1/9789241547321_eng.pdf).
- WORLD HEALTH ORGANIZATION, 2011. World report on disability. Available at : file:///C:/Users/welcome/Downloads/9789240685215\_eng%20(1).pdf.
- WORLD HEALTH ORGANISATION, 2014. The Convention on the rights of persons with disabilities. Training Guide No. 19. United Nations Office Human Rights Office of the High Commissioner. Available at: [http://www.ohchr.org/Documents/Publications/CRPD\\_TrainingGuide PTS19\\_EN%20Accessible.pdf](http://www.ohchr.org/Documents/Publications/CRPD_TrainingGuide PTS19_EN%20Accessible.pdf).

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- SHARMA, A. and A. DUNAY, 2016. Life Proposes, Disability Disposes: An Overview on the Models of Disability with Special Reference to WHO Conceptual Models. *Littera Scripta* [online]. České Budějovice: The Institute of Technology and Business in České Budějovice, 9(3), 66-83 [accessed: 2016-12-23]. ISSN 1805-9112. Available at: [http://journals.vstecb.cz/category/littera-scripta/9-rocnik/3\\_2016/](http://journals.vstecb.cz/category/littera-scripta/9-rocnik/3_2016/).