Discrepancies of the Medical, Social and Biopsychosocial Models of Disability; A Comprehensive Theoretical Framework

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Abstract

Various models of disability aim at providing a description and a conceptual framework for explaining what disability is and how disabled people experience disability. These models had also provided information and facts through time, so society to develop those laws and regulations to positively affect the lives of disabled people. Although a range of models attempted to provide an understanding of disabilities, the prevailing and most commonly used and applied models are the medical, the social model, and the biopsychosocial model of disability. The presented theoretical framework aims at incorporating knowledge and findings on the medical model, the social model, and the biopsychosocial model of disability thus to allow readers to conceptualize in the context of disability.

Keywords: Disability, Social Model, Medical Model, Biopsychosocial Model

I. Introduction

Before the development of the social model of disability, disability was explained and treated in the framework of medicine through the medical model of disability. That is, disability is diagnosed, cured and treated (or fixed) by means of medicines (Arndt & Van Beuren, 2013; Baril, 2015; Dewa, Hees, Trojanowski, &Schene, 2015; Goodrich, & Ramsey, 2013; HashemiNazari, Mahmoodi, Mansournia, &HolakouieNaieni, 2013; Leshota, 2013; Linker, 2013; Ohajunwa, Mckenzie, Hardyy, & Lorenzo, 2014; Rudnick, 2014). Based on this, medical model principles stated that since disabilities are considered diseases, practitioners, and other experts needed to work on the development of universal criteria, methods, and treatments, to identify the 'malfunction' and effectively 'repair' it (Thompson, 2016). It is clearly understood by the medical model that disabled people are abnormal, and to reduce or eliminate if possible this abnormality, the knowledge and skills of medicine and medical professionals is necessary (Thompson, 2016).

The social model of disability which assumes that disability is affected by systemic obstacles relative to social and political constructs was produced by disability rights political activists to secure civil rights for people with disabilities progressively and has gained considerable acceptance ever since (Sisti, 2015). In the 1970s, the Union of Physically Impaired Against Segregation (UPIAS) confronted medical model supporters, trying to redefine disability, in the sense that it is the society which disables people by imposing the disability on top of people's impairments (Thompson, 2016). Thus, external factors-imposed disability which eventually leads to isolation and exclusion from society. In this new approach, disability is not the result of bodily 'malfunctions' or differences but is a social phenomenon due to the inability of society to understand, accept, value and adapt to different individuals (Thompson, 2016).

The biopsychosocial model of disability views disability as a combination between the health state of an individual and her/his surrounding environment that is the society (Active Assistance, 2012). This model accepts the provisions of both the social and the medical models, although it assumes that these provisions are not adequate by their own, as these are interrelated. Therefore, a disabled individual's opportunities for employment and full participation in societal activities are influenced by the health conditions and the related treatment of the individual, by her/ his education, skills and training, as well by the contextual factors such as society, infrastructure and the workplace (Active Assistance, 2012). Consequently, the biopsychosocial model of disability presumes that disability occurs when the above factors do not function or fail to work to their full potential (Active Assistance, 2012).

II.   The Medical Model of Disability

Disability in the medical model is viewed as a medical condition, and as such, doctors are the specialists to treat and eliminate both the symptoms and the illness to improve the condition of the individual (McTigue, 2015). As the medical model considers disability a sickness, it is based on four elements, starting by blaming biological factors and not the sick individual who is not responsible for the illness as he/she has no control over the influencing factors or the illness itself. Based on the above first element, the second element of the medical model is that disabled people or 'sick people' are excluded from any social commitment and responsibilities which are viewed 'normal' by others (McTigue, 2015). Nevertheless, disabled people can be in a rightful position in society if and when they work with experts (doctors) and other medical professionals so to eliminate their sickness and eventually recover to the best maximum level (McTigue, 2015). As the medical model viewed disability as an individual insufficiency (although it might be cured and treated medically), it made things easier for employers to reject disabled candidates for employment without taking responsibility; people with disabilities were the ones to blame for their lack of success in employment (Travis, 2015). Further, the medical model concepts gave power to governments and courts (apart from employers) to avoid taking actions when employment opportunities were lessening for people with disabilities (Travis, 2015).

In the medical model of disability, a person is regarded as disabled if due to impairment cannot do things 'normally' as others (Bailey, Harris & Simpson, 2015). Due to this fact, the person faces limited opportunities not only to be employed but also to participate in daily social activities; this will consequently lead to poor or reduced living standards. The only chance for improved opportunities for the individual based on the medical model is to be willing to allow medical experts to cure and treat the impairment (Bailey et al., 2015). The view of the medical model is that disability explains the limited functioning seen as a deficiency, because of body impairment (body function, structure, and mind) (Haegele, & Hodge, 2016), caused by physical, sensory, affective, or cognitive issues (Blustein, 2012). This deficiency based on the medical model is a problem that can only be faced medically, so that these people can properly function in society (Bingham, Clarke, Michielsens & Van De Meer, 2013; Palmer & Harley, 2012). Thus, the view of the medical model is that people are considered disabled as they are unable to function as 'normal' people do; this is quite important because the way disability is defined and viewed affects the perceptions, expectations, and behaviors of people towards disabled people (Brandon & Pritchard, 2011; Roush & Sharby, 2011)). As the medical model looks at things from a biological point of view, disability is then seen as a biological problem (Haegele, & Hodge, 2016). Most importantly, the medical model advocates that any difficulties and problems encountered by disabled people are independent of external environments, such as society, culture, or politics (Blustein, 2012).

The prevailing notion in the United Kingdom until the 80s relative to the concept of disability was that physical disability was about a dysfunctional body (or mind in the case of mental disabilities), and it was the responsibility of physicians and medical experts to identify and treat disabled people (Duncan, 2013). This conception of disability concluded that the disability is the actual impairment of a person, and this person is viewed as incomplete, flawed or broken, experts are responsible for defining the disability, classifying people by disability, and prescribing the cure or treatment. Further, this treatment is provided by the state, which the disabled person must accept or reject, as it is non-negotiable, or other alternatives did not exist (Duncan, 2013).

A significant criticism of the medical model is that although medical experts should be held responsible for treating and curing disabilities, as they have the expertise and knowledge, their power should be limited only in the medical aspects of disabilities. The medical experts should not have any control or authority over the lives or the perception of others (society, employers, governments) (Haegele, & Hodge, 2016). Additionally, another criticism of the medical model is that it associated people with disabilities with the sick role, stereotyping disabled people as abnormal and weak, influencing the behavior and interaction of societal members towards disabled people (Haegele, & Hodge, 2016). For example, this concept can enhance the negative perception of people towards disabled individuals who might want to participate in sports and achieve big things, and see them as incapable (Haegele, & Hodge, 2016). The medical model of disability holds that the impairments of a person are the cause of any difficulties encountered in society. Thus, in the effort to find employment, these difficulties –which are viewed as a medical problem- can only be decreased through treating or curing the impairment, so that to assist the disabled person to adapt and learn how to function despite the disability (Goering, 2015). However, many disabled people are excluded for societal and workplace environments because of the negative perceptions and pitying attitudes of others (institutions, society, employers, governments) and not because of their impairments, which in certain occasions, might not be even visible to others (Goering, 2015).

Michael Oliver criticized the medical model of disability on the bases that the model puts the problem of disability on the individual and secondly, as a consequence of the first principle, the model blames the functional limitations of the individuals as the leading causes of their disability (McTigue, 2015). Apart from Oliver, the medical model has been highly criticized by disabled people themselves, believing that it is the society that disables people and not their impairments, by excluding them without valid reasons from full involvement and participation in society. Their view posits that disability is not their impairments but the societal factors that restrict disabled people, including prejudice and discrimination (McTigue, 2015). Additionally, disable people assert that they are fully capable of participating both in a society as well as in a workplace, if only there is adequate support (including practices, training, and equipment) from society and governments; further they emphasize that actual cures for many disabilities may never be found, so the role of medical experts is diminished (McTigue, 2015).

III.   The Social Model of Disability

Mike Oliver developed the social model of disability in 1983 (Folguera, 2014; Kumbier& Starkey, 2016; Larkin & Milne, 2014; Majinge& Stilwell, 2014; Nunkoosing, 2013; Ohajunwa, Mckenzie& Lorenzo, 2015) and it is directly relevant to disabled populations and employment and identifies societal negative attitudes and exclusion as the main contributor to the inferior position disabled people are. Furthermore, Oliver (1983) hypothesizes through the social model that the negative societal attitudes are the primary sources of were societal and employment problems arise for disabled people (Inckle, 2015; Macdonald, 2012; Meloni, Federici, & Dennis, 2015; Nuwagaba & Rule, 2016; Saltes, 2013; Wise, 2016). Oliver (1983) posited that the physical, economic and social barriers faced by disabled populations are not a result of their mental or physical impairments but are constructed by the social, cultural, ideological beliefs and attitudes that result in environmental barriers (Parchomiuk, 2013; Chiu et al., 2013; DePoy & Gilson, 2015; Sylvester, 2014). Oliver (1983) viewed disability as a social construct that results in discrimination against people with impairments in the form of physical barriers and job discrimination (Parchomiuk, 2013; Chiu et al., 2013; DePoy& Gilson, 2015; Sylvester, 2014;), and problems reside inside the environment which fails to accommodate disabled people. Thus, based on Oliver (Abrams, 2015; Cottingham Phillips, Hall, Gearity& Carroll, 2014; DePoy& Gilson, 2012; Emong & Eron, 2016; McClimens & Burns, 2015; Mtetwa & Nyikahadzoi, 2013), disability refers to a society that discriminates, weakens and separates disabled individuals by not providing the necessary education, training and accommodations, instead of a limitation caused by any form of impairment to perform day-to-day activities. The social model of disability elucidates that discriminatory societal policies and inadequate infrastructure adaptations, limit full participation of disabled individuals in society (Halfon, Houtrow, Larson & Newacheck, 2012), not only for those countries but future purposes.

Shinohara and Wobbrock (2011) asserted in their study that society sees disabled people as different from other members due to their impairments, and consequently are viewed as weak, dependent and incapable. For example, in their study, they were able to identify that others perceive people using assistive technology as disabled and incapable of functioning when not using these technologies. However, these were both invalid assumptions, because the fundamental concept was for the disabled people to have access to the technology, services, and information as everyone else, and not to entirely replace any functioning (Shinohara & Wobbrock, 2011). These assumptions, though, were perceived to be right in the minds of the participants/ respondents of the study, who were using assistive technologies (such as Braille Note, Screen Magnification, accessible cell phones, Voice Note, and Pathfinder) in their current job or previously in their career.

The social model theorists viewed existing societal attitudes as hostile and isolating towards disabled populations, through acts of discrimination and unfairness, segregated employment and education and inaccessible infrastructure. Biased hiring and promotion policies, limited training and educational opportunities, as well as inadequate infrastructure, inflexible work schedule, and non-existent supportive equipment, are some examples of these unfair acts (Sullivan, 2011). Therefore, the solution to these problems is not healing the impairment or disability as such, but changing societal perceptions to reduce discrimination and injustice, enable access, and remove negative attitudes. According to the social model, removing society's negative perceptions and abolishing environmental, economic, social and cultural barriers will eventually lead to disability elimination, in the sense of eliminating discrimination. Eliminating discrimination, in turn, would enable disabled individuals to be treated as unvalued human beings, hence indirectly eliminating functionality problems caused by disabilities (Heavy, 2013; Roush &Sharby, 2011; Sullivan, 2011). As a result, although disability problems still exist for various people, these can be viewed as obstacles that can be overcome through physical and mental support both by society, the government and employers.

The social model of disability influenced the development of public policies regarding the disabled population including education and employment both in the European context as well as internationally (Anastasiou & Kauffman, 2013). For example, Norway extended their safety net of social welfare services and expanded their legislation on support services such as airplanes and railways (like the UK as well) (Anastasiou & Kauffman, 2013). For disabled people, Anastasiou & Kauffman (2013) assumed that sometimes a socially hostile and discriminatory environment might be much worse than their mental or physical impairments themselves if social barriers are not removed.

Conclusively, the principles of the social model of disability supported the development of disability legislation. For example, in the United States, the development of the social model of disability was based on the principles of the Civil Rights Act of 1964 to support amendments and new legislation, such as the Americans with Disabilities Act, prohibiting disability and employment discrimination (Edie, 2016; Frieden, 2016; Krahn, Walker & Correa-De-Araujo, 2015; Peacock, Iezzoni & Harkin, 2015; Waterstone, 2015; Roush & Sharby, 2011). The objectives of these legislative acts were not only to improve accommodation and working conditions but also to decrease the workplace discrimination for disabled populations. In addition to the US legislation, the World Health Organization also accepts and uses the social model as part of its International Classification of Function, Disability, and Health (ICF). The ICF places social attitudes, injustice, and discrimination as one (among others) of the environmental factors affecting disabled individuals (Roush &Sharby, 2011). Even though the enactment of legislation to protect disabled people and abolish discrimination did not bring the expected results (since only one-quarter of the disabled people participate in the labor market), yet through this legislation, governments managed to positively influence employers regarding employing disabled people and providing accommodations in the workplace. The above improvement is supported by the fact that in the European Union, 35% of the disabled were employed in 2001, whereas this number was increased to 47% ten years later; even that the number is still low (EUROSTAT, 2001). In some European countries, for instance, governments provide financial assistance and offer tax exceptions when organizations hire a specific number of disabled people (based on the organization size) (Parlalis, 2013).

Nonetheless, the point at first was about the civil rights of disabled people related to providing workplace accommodations, and removing any discrimination concerning hiring and promoting practices. Then, to mandate employers to include disabled people as equal members (through financial incentives and financial retributions), and at the same time to help them understand the significance of protecting each society's members' fundamental rights as well as securing their full integration into society. Despite the above overall long-term objective, the key constitutional objective of disability legislation remains to ensure that disabled peoples' civil rights were secured and that those violating them were liable for damages and compensation.

In support of the above, a study by King's College in London revealed that people in the UK perceive disability not only as a physical reality but also as a social construction, because society inevitable stigmatizes disabled populations, treating them with inequity and prejudice (Heavy, 2013). The qualitative study of Heavy (2013) finally concluded that three interlinked definitions and meaning of disability exist; disability as an official status, disability as a personal (in)ability, and disability as stigmatizing mask. Similarly, a study by Halfon, Houtrow, Larson & Newacheck, (2012) revealed that there had been no progress in reducing socioeconomic disparities in disability over the past half-century since disabled people are still considered of lower social status and receive lower income contrasted to the non-disabled people. However, improvements have been made in regards to the recognition and diagnosis of disabilities, as well as a variety of treatment and intervention programs are created (Haflon et al., 2012). Although legislation amendments aimed towards decreasing socioeconomic differences, the legislation seems to be ineffective on social perceptions and attitudes.

The definition of disability based on the social model is that disability is the social exclusion of disabled people and not their impairment that disabled an individual (Hutchinson, Roberts, Kurrle& Daly, 2016). Consequently, 'impairments' and 'disabilities' are different terms, as 'impairments' are functional limitations due to physical, mental or sensory impairment, while a 'disability' is the exclusion from social participation through limited opportunities compared to others, due to physical and social barriers. As a result, disability is not just a tragic event or situation that some people experience; hence it cannot just be treated only medically as it may not or cannot fix the 'problem' (Hutchinson et al., 2016). The importance therefore of the social model of disability is to help comprehend how society disables and consequently discriminates disabled people by treating societal members unequal (Hutchinson et al., 2016). Society and employers need to accept the provisions of the social model thus to reframe their policies, practices and most importantly their perceptions, so to fully include disabled people in societal and workplace activities.

The idea of the social model is that disability is the result of discriminatory and exclusion practices towards disabled people, relative to their everyday life activities and workplace experiences (Winance, 2016). This idea aims at detaching impairments or deficiencies from disabilities, in the sense that a deficiency relates to a biological characteristic of a person, whereas disability is segregation between people because of their impairment. Thus, disability is more of a social difference rather than a natural situation, as it stigmatizes and excludes certain individuals from society because of body diversity, in the case of physical disabilities (Winance, 2016). Unlike the medical model, the social model posits that disability can be reduced or even eliminated, in the sense that various people with impairments might not be disabled, if society supports them (Bailey et al., 2015). For instance, some types of impairments (such as facial deformity) might not cause pain or distress to an individual, and further this person can equally perform work activities just like any other person with no impairment. Still, due to this impairment, society might regard this person as disabled, resulting in possible decreased opportunities for employment (Bailey et al., 2015). The societal view exists because possible discrimination based on the social model of disability might exist not due to impairment, but due to a combination of structural, cultural and societal factors acting as barriers for disabled people. Therefore, the social model redefines disability, positioning its foundation within the socioeconomic environment instead of the individual, which fails to recognize and meet the needs and rights of people with disabilities. In doing so, more barriers are placed in disabled people's way of fully engaging in societal and employment activities (Bailey et al., 2015).

Further, political activists confronted this notion of the medical model of disability moving towards the new-fangled social model of disability, stating that impairments are not abnormal, but a part of human diversity and disability occurs when this human diversity is rejected by society (Duncan, 2013); when society rejects this human diversity is regarded as faulty and inconsistent. Additionally, the experts to deal with disabilities and impairments are the disabled people themselves, together with social and governmental services to assist and support the disabled people (Duncan, 2013). Hence, in the era of the disability rights movement, the development of the social model of disability came to question the medical model by redefining disability. The social model blamed the social environment for the exclusion and discriminatory practices against disabled people, instead of holding disabled people responsible for the lack of opportunities, especially regarding employment (Travis, 2015). Thus, the social model might be seen as a causal attribution theory (Travis, 2015) providing a conceptual framework for moving from an internal to an external causal attribution in the effort of elucidating inequality and injustice for disabled people; in other words, the responsibility for this inequality falls on the social, cultural, and economic environments instead of the disabled individuals (Travis, 2015).

Oliver through the social model of disability acknowledged disability is not an individual medical problem, but the problems disabled people face exist because of the negative response of society (Gallagher, Connor, &Ferri, 2014). Society, therefore, imposes barriers and limitations deriving from discrimination and result in isolation, separation, poverty, and unemployment of people with disabilities (Gallagher et al., 2014). In summary, the new notions of the social model of disability are that disability and impairment are different terms, disability results from discriminatory social practices upon disabled people, and a social imbalance and inequity exists between disabled and non-disabled people (Gallagher et al., 2014). Additionally, the social model opposed the medical model as it was believed that to eliminate discrimination one had to firstly cure disability, emphasizing the experiences of disabled people so to improve their living and employment conditions (Gallagher et al., 2014).

The social model advocates that the structure, practices, and policies of societies and organizations need to change so to accommodate diverse groups of people (citizens and employees), and when these changes take place, the needs of various groups (i.e., people with different types of disabilities) will be met, instead of directly applying treatment to a disabled individual (Counts, 2015). However, considering the above, one might criticize this approach of the social model as not all needs might be met by altering structures and policies. For instance, people experiencing distress in a high level might not be assisted only by modifications, but they will probably need individual targeted care, outside specific contexts, i.e., outside of an organization (Counts, 2015). On the contrary though, by following and implementing a national policy for modifications in various aspects of society or an organization, it can be assured that different needs of different groups of people can be met simultaneously, without needing to focus on specific groups (Counts, 2015). Another important aspect of the social model of disability is that it portrays the term disability as part of human diversity (physical, cognitive, sensory, or emotional), stressing the normality among diverse groups, and not their social or other exclusion and discrimination (Gallagher et al., 2014). Therefore, disabled people are seen as a diverse group in society, but not as an abnormal group. Diverse groups, therefore, should have equal rights, responsibilities, and opportunities.

Most significant is also the fact that the social model of disability increases the awareness and perception of disabled people themselves, as this philosophy supports them the way they are, teaching them that it is the society that needs to change and not themselves (Meyers, 2014). Thus, for an individual to claim that he/she is disabled, this means that the person requires respect, recognition, equality, and justice, as all citizens and employees in an organization. Disability should be seen, according to the social model, as something impressed by society additional to any impairments that lead to isolation and exclusion from full engagement in everyday social activities, including opportunities for employment and advancement (Meyers, 2014). Furthermore, the social model developed by political activists aimed at gaining same rights and status for the disabled people as the non-disabled ones, as until then non-disabled people or 'able-bodied' people unwittingly or intentionally oppressed disabled people (Winance, 2016). The social model aims at balancing this asymmetry between people by giving disabled people those same life opportunities as others (Winance, 2016). As the medical model tries to bring balance people disabled and non-disabled people by attempting to treat and cure disabled people, the social model denotes that is society that needs to change and be cured to make disabled people live healthy and autonomous and be able to make their own decisions by exercising their rights as equal members of society (Winance, 2016).

With the passage of the UN Convention on the Rights of Persons with Disabilities in 2006, the social model came to be the prevailing logic (that of social discrimination instead of individual differences due to physical, cognitive or sensory disparity) of the worldwide disability field. Disability organizations and associations all over the world came to promote and support new rights for the disabled people (Meyers, 2014). Thus, these organizations aimed at addressing individual differences of disabled people through the promotion and protection of their human rights, and not through therapy and rehabilitation (Meyers, 2014). Again, the logic behind this movement is that disabled people are a homogeneous group characterized by significant differences, part of a greater diversified population.

In the UK the social model emerged in 1975 when discussions began among the Disability Alliance and the Union of the Physically Impaired Against Segregation (UPIAS) with the purpose of finding ways to eliminate discrimination and make disabled people more involved both in the workplace as well as in the society (Owens, 2015). Similarly, the social model of disability in North America was developed in the 1960's along with the Civil Rights Movement against racial discrimination. Then, the concept of the Movement was also applied to disabled people and discrimination towards them, as the society failed to incorporate the needs and goals of people with disabilities in the social environment (Owens, 2015).

The social model of disability has enabled disabled people to challenge the status quo of social exclusion and discrimination, by connecting civil rights and political activism and eventually enable disabled people to assert equal and rightful rights in a society or a workplace environment (Owens, 2015). Disabled people through the social model achieved equal participation in society through the elimination of social barriers which were the leading causes of disability discrimination (Owens, 2015). The social model looks to improve and enhance the social inclusion of disabled people. To achieve this, changes are required to infrastructure and social policies that ultimately, they will reduce the negative impact on disabled people, as well will reduce the harmful misperceptions towards disabled people (Thompson, 2016). Therefore, instead of working into altering the perceptions of society towards disabled people, the social model asks first to make the necessary changes, and then this perception will change, and not the other way around. These changes might include accessible buildings, equal opportunities for employment and advancement and equal pay; these can only be achieved through legal and political changes (Thompson, 2016).

Also, the social model was the trigger for legal and policy change, such as the enactment of the Americans with Disabilities Act (ADA) along with the mandate for reasonable accommodations (Travis, 2015). The above was (and still is) quite significant especially for employment purposes and in the workplace environment, which will positively affect a disabled person's abilities and performance (Travis, 2015). This essential and obligatory support for disabled employees includes organizational policies and practices, structures and procedures, equipment and employment terms as to diminish any adverse effects of impairments to work activities.

One other noteworthy belief is that impairment is not something negative, worth of pity, as is just a description of a person's body structure or body mechanism (Goering, 2015). For example, people who are birth blind, see themselves as normal, and they behave and live accordingly, as they do not know the difference between seeing and being blind. Therefore, they rightfully expect to be treated as 'normal,' with respect, justice, and equality (Goering, 2015). These people will behave as disabled and have experience as disabled people when society responds to them as such. Hence,

based on the social model of disability, society in general needs to find ways through legislation, structural changes, policies, and practices to include disabled people in all aspects of life, including employment, by reducing attitudinal, physical and environmental obstacles. Otherwise, people with impairments will be seen, feel and treated as disabled, psychologically and physically affecting their ability to work, participate in society, and their quality of life (Goering, 2015).

At this point, it is worth mentioning that although the social model of disability improved the living conditions and workplace opportunities for disabled people, it is considered a development of an earlier model, developed by Paul Hunt, back in 1966, 24 years before Oliver's theory (Bailey et al., 2015). Hunt's model began in a group of disabled people in the Union of the Physically Impaired Segregation (UPIAS), and it was called the social oppression theory of disability (Bailey et al., 2015). The social oppression theory of disability was mainly positioned on the lived experiences in the workplace and the society of the disabled people. The overall purpose of this model was to gain sufficient knowledge regarding disabilities, support, and discrimination, so to improve the lives of the disabled people (Bailey et al., 2015).Regarding taking measures towards disability and discrimination, the social model suggests that professionals and experts need to focus on society and not the individual with disabilities. These measures ask for political and social change and not a change in disabled individuals, or a change in their bodies (Bingham et al., 2013). The political and social actions should be –based on the model- to redefine and see disability as a form of human diversity (Roush &Sharby, 2011), as many problems for the disabled people can be substantially reduced or eliminated if environmental barriers are removed (Blustein, 2012; Haegele, & Hodge, 2016).

Although the social model of disability is viewed by many as the new paradigm, it is still not universally accepted, and there are still various versions of the model as different societies view the model principles differently (Barney, 2012; Haegele, & Hodge, 2016). For instance, nine diverse descriptions of the social model exist: (a) the social model of the United Kingdom, (b) the oppressed minority model, (c) the social constructionist version of the United States, (d) the impairment version, (e) the independent living version, (f) the postmodern version, (g) the continuum version, (h) the human variation version, and (i) the discrimination version (Barney, 2012; Haegele, & Hodge, 2016). Nevertheless, the issue is not to identify the differences and similarities of the above versions. All nine are based on the notion that society imposes disability on individuals with impairments (Bingham et al., 2013; Brandon & Pritchard, 2011; Palmer & Harvey, 2012), and it is separate from an impairment which is seen as an abnormality of the body (Haegele, & Hodge, 2016). Thus, nothing is disabling about having an impairment (Blustein, 2012). Furthermore, the basic premise of the social model of disability is that the exclusion and segregation of disabled people from society and workplaces is only caused by the inability, unwillingness and failure of society to remove any barriers prohibiting disabled people to fully participate in workplace and social activities (Bingham et al., 2013; Blustein, 2012; Brandon & Pritchard, 2011; Palmer & Harley, 2012). One perhaps valid critique of the social model is that it completely separates impairments from disability, which it remains a central part of disabled people's lived experiences (Bingham et al., 2013; Palmer & Harley, 2012). Social model supporters maintain the belief that impairments are not part of a disability. However, Palmer & Harley (2012) stress the fact that the experiences of disabled people because of their impairments, are significantly essential and affect their interaction with society.

IV.   The Biopsychosocial Model of Disability

George Engle first proposed the Biopsychosocial model of disability back in 1980. The model follows a philosophy that incorporates the social and the medical models of disability in the sense that this model accepts as affecting factors for disability discrimination, the impairments of individuals and the negative societal factors (Penney, 2013). The social model of disability proposes that disability is caused by social exclusion and discrimination towards disabled people, and the medical model stresses that disability is caused by the individual impairments that distinguish people with disabilities from non-disabled people. The biopsychosocial model of disability aims at linking both the social and the medical models by presenting a compromised approach. One can say that the biopsychosocial model forms a more integrated and comprehensive concept around disability, encompassing elements from both the social and the medical model (Bath, Trask, McCrosky, & Lawson, 2014). Thus, this model proposes that disabilities are caused by physical or biological problems which need to be treated by medical experts. Also, society needs to find ways to include disabled people in social, economic and political activities by supporting them and providing them equal opportunities (Bath et al., 2014). Therefore, the biopsychosocial model is based on the fact that disability is an interaction between three sets of factors; physical, such as age and gender, psychological, such as behavior, and social, such as social and cultural environments (Bath et al., 2014). It should be noted that the biopsychosocial model forms the basis of the World Health Organization's (WHO) International Classification of Functioning, Disability, and Health (ICF) as it is assuming to

signify a more inclusive classification system for describing disability in a variety of levels and contexts (i.e., social context and personal context) (Bath et al., 2014).

The biopsychosocial model of disability emphasizes the fact that disability is not only caused by impairments or because of pathophysiological reasons but also due to some psychosocial and lifestyle factors (Gatchel, 2015). This point of view partly opposes the medical model and the social model of disability as it views these models as incomplete (Gatchel, 2015; Gatchel, McGeary, McGeary, &Lippe, 2014). Academics, practitioners, and clinical researchers adopt the biopsychosocial model to better understand and deal with pain issues, as well as discriminatory issues deriving from biological, psychological and social factors (Gatchel et al., 2014). The biopsychosocial model of disability initially developed by Engel in the 1970's, formed the basis for a new evolved model by Waddell and Aylward and was used as the conceptual framework for redefining disability in the UK (Shakespeare, Watson &Alghaib, 2016). The biopsychosocial model of disability by Waddell and Aylward aimed at explaining a multi-factorial view on disability bringing together elements such as medical and related professional care, personal effort from disabled people, and social modifications, including work alterations as well (Parliamentary Office of Science and Technology, 2012; Hussey, Money, Gittins &Agius, 2015).

Similar to George Engel's model, the new model of Waddell and Aylward formed a combination of the social and the medical models, as they were both regarded by them as weak (Shakespeare et al., 2016). Waddell and Aylward regarded the medical model as quite simple and regarded the social model as subjective as it is only based on the personal views, experiences and perceptions of disabled people, falling short of scientific evidence (Shakespeare et al., 2016). Waddell and Aylward, although medical professionals (orthopedic surgeon and chief medical officer), managed while working at the Centre for Psychosocial and Disability Research of Cardiff University, to incorporate internal (personal) and external (i.e., society and work) factors in their model (Shakespeare et al., 2016). The above achievement helped the government to develop mechanisms to support regarding infrastructure, practices, and policies, disabled people who experienced barriers due to their disability, especially in finding and accessing employment (Shakespeare et al., 2016; Van Oudenhove & Cuypers, 2014). It should be noted at this point that there is a possibility that not all disabled people could be able to fully participate in society or have access to employment, as these depend on how severe their impairment is (Shakespeare et al., 2016). However, society should find ways to prevent stigmatization of these people and to support them in all means to avoid poor living conditions and social isolation. Regarding the effects and consequences of this approach on the employment outcomes of disabled people, these are still unclear as this model is relatively new. However, as it is an extension of the social model, encompassing some additional factors, it is assumed that the outcomes of this approach towards the employment opportunities of dabbled people will be more than positive.

V.   Conclusion

Because of the view of the medical model that disabled people may be excluded from the ordinary obligations of society, including employment, employment opportunities for disabled people are limited as they have difficulties finding work and eventually lack financial resources. The view of the medical perspective reinforces stereotyping and prejudice against employers towards disabled people, and this results in isolation from the labour market. Stereotyping, as a result, is supported by the fact that in countries where the medical model is employed, people with disabilities face burden and minimal employment opportunities. In Peru and South Africa for example, where the medical model prevails, the employment rate of people with disabilities is 23.8% and 12.4% respectively, whereas the employment rate of the overall population is 64.1% and 41.1% respectively (World Report on Disability, 2011).

Moreover, the medical model suggests that to decrease or eliminate a disability, treatment should be concentrated on the individual to make her/him as 'normal' as possible (Haegele, & Hodge, 2016). This treatment must be made by the medical professionals (doctors and scientists) and can take place in particular premises, such as rehabilitation centers (Palmer & Harley, 2012). On the contrary, the social model opposes in fixing the individual but stresses the belief of fixing society (Haegele, & Hodge, 2016). This should occur not on rehabilitation centers; instead through social arrangements such as reasonable accommodation, in the environment (i.e. workplaces, public transportation, buildings) increasing both the level of understanding and positive attitudes, but also opportunities and success probabilities for disabled people (Blustein, 2012; Haegele, & Hodge, 2016).

In contrary to the medical model described above, the social model had somewhat positive effects regarding the employment opportunities and outcomes for disabled people. The most notable effect is the change in the negative perceptions and attitudes of employers towards disabled people. The above effect is also supported by the fact that in

countries where the social model is employed the employment rates for disabled people are higher than countries employing the medical model. For instance, the employment rate of people with disabilities in Australia is 41.9%, in Canada 56.3%, and in the USA 38.1%, as the employment rate of the overall population is 72.1% in Australia, 74.9% in Canada, and 73.2% in the USA (World Report on Disability, 2011).

Nevertheless, the biopsychosocial model constructed by Engel and later developed by Waddell and Aylward seems to be more integrated and complete because it joins together the social and medical models. The biopsychosocial model also forms a common valid explanation of disability as followed by the International Classification of Functioning, Disability, and Health (ICF) of the World Health Organization (WHO) (Parliamentary Office of Science and Technology, 2012; Shakespeare et al., 2016). The ICF encompasses an assortment of clarifications and allows the role of society to be incorporated in every clarification (Parliamentary Office of Science and Technology, 2012; Shakespeare et al., 2016).

Summarizing, although there can be various and noteworthy differences between the medical and the social models of disability, it is believed that both are necessary and can contribute in understanding disability, as they might be seen as two sides of the same coin (Haegele, & Hodge, 2016). In regards to their differences, it is evident that the medical model sees disability as a medical phenomenon perceiving the individual as faulty and deficient with limited functioning naturally disabling a person. The social model sees disability as a social construct, separating impairments and disability, which as viewed as an abnormality of the body (impairment) and a disadvantage caused by society (disability), perceiving the individual as unique (Haegele, & Hodge, 2016; Palmer & Harley, 2012). Furthermore, the medical model places the insufficiency on the individual whereas the social model on the surrounding external environments (including society) that fails to accommodate people with disabilities (Haegele, & Hodge, 2016; Palmer & Harley, 2012).

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