Sociology and Social Work Review
Volume 8 (Issue 1)/2024 | pp. 19-34


DOI: 10.58179/SSWR8102
https://globalresearchpublishing.com/sswr/


Sport, social inclusion, disability and illness. Improving quality of life using new neuroscience methods

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Abstract
This work aims to make a contribution on how social sciences can be of support and help for people with disabilities. Social sciences can play a significant role in supporting and helping people with disabilities by identifying the environmental and social barriers that make disabilities most visible and challenging for individuals, removing them and creating more inclusive and accessible environments for them. Social sciences can also empower people with disabilities by giving them a voice and helping them build confidence and social capital.
In fact, the world of physical activity, sport, disability and the path towards conquest of resilient peculiarities must merge in the awareness that they guarantee a better quality of life for disabled people is possible beyond barriers cultural, social and architectural.

Keywords*:* sport; neuroscience; health; society; social inclusion.

Introduction

Throughout time, the relationship between health and illness has often been subjected to relevant and indisputable changes, Among the latter, it is worth highlighting the development of many processes of "cleft and separation" between the different dimensions such as the social one, the biological one and so on. Indeed, the balancing and, consequently, the overcoming of the traditional biological model are both a clear and tangible proof of a better awareness regarding the concepts of the individual and the environment as parts of the bio-social and psychological aspects. The harmony and the rightly indispensable conjunction between disability, social dimension and the environment has led scholars to shed a new light on the essential role played by both sport and physical activity. Empirical researches and international studies have both highlighted, for example, the ways through which sport, when used as a means for promoting social inclusion and developing the didactic and motoric processes of people with disability,

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whether the latter be temporary or permanent, has become an important element which is impossible to exclude in order to guarantee a quality of life which reaches beyond the minimum acceptable limit; a right indispensable for people with disability. We can scientifically consolidate the relevant role played by sport not only as an element of cohesion, but also of promotion of new ways for socialization and for reclaiming spaces, the right self-awareness and experiences which the person with disability rightfully needs to share among a group of heterogeneous peers. Currently, there have been a different variety of empirical studies which have highlighted the strong relationship between sport and the development of socio-cultural processes and inclusion; a relationship which people with disability need in order to keep accomplishing knowledge, regaining (recovering) self-esteem and self-awareness of themselves and in all the others who accompany them though the daily different spaces and aspects of socialization. The following paper will try, based to the aforementioned premises, to reaffirm the importance and the necessity of promoting the process of interaction between elements whose ai mis to guarantee the social and educational welfare of people with disability within a social context where the group, with its diverse elements of constitution, has to be the driving force of the pedagogical experiences which important for the future of the person with disability, just as for their families, the sport teachers and socio-sanitary staff. The dimension of physical activity, sport, disability and the path towards the achievement of resilient peculiarities must merge in a type of awareness which is able to guarantee a better quality of life also for disabled people beyond pre-given cultural, social and architectural barriers.

Sociogenesis of the health/illness dimension. The right to pedagogical and social inclusion between participation and sport.

In order to give a definition of what is meant today by terms such as health, illness and disability as a means for order identifying an exhaustive and unitary definition of knowledge around the elements of our study is certainly not an easy task to follow. There are essentially two substantive reasons for this objective limitation. First of all, the concept of health has been both constantly enriched and modified in relation to the succession of historical cycles and, above all, in relation to the different social and cultural horizons that this concept has been crossing over time. The concept of health and its socio-genetically meaning are both aspects closely bounded to the historical, social and anthropological changes in the constitutive and founding elements of the social horizon. Only by relating these elements and observing them in their definition it would be possible to understand the mutability of the very concept of health and disease. Socio-cultural transformations and changes have indeed preserved the original features of the concept. Nevertheless these have been accompanied by different, necessary readings, which have ultimately been greatly affected by the development of paradigms and models following the active agency of most modernist thrusts. This aspect suggests that it would be sufficient for us to refer to and reflect on how both relationships of communication and interaction between the doctor and his patient has changed over time. This ultimately include the keen reading of what is understood today within the boundaries of the "disease" dimension, of the concept of well-being, of disability paradox and of QoL (quality of Life). Nowadays, in the light of the different approaches of such a reading, the contributions of sociologists such as I. Illich, T. Parsons, N. Elias up to the recent contributions that refer to the numerous studies conducted by Achille Ardigò and his school, are a tangible example of this thought. The quadrilateral matrix of concepts, firstly theorized by A. Ardigò, is a sort of map that takes shape in a new emerging paradigm; it

represents a new sociological approach to health, illness and the institutions that deal with it (C. Lonardi 2011). Indeed, by analyzing the health system, the author manages to bring together multiple interconnected analytical levels. The quadrilateral to which Ardigò was referring represents a broader matrix of concepts compared to the models previously proposed and intends to take into consideration, in order to understand the new horizons of the health/illness/person relationship, the interaction of four very distinct dimensions. Ardigò understands, for example, how it is necessary to highlight the existence of dialogue and of an interaction between elements such as internal nature, external nature, social nature, the person-subject and all elements which, combined together, give rise to six pairs of bidirectional conjunctions. From the implementation of this system, it emerges that there is an internal nature that focuses more to keenly evaluate the relationship between the concept of health and its protection; a process that continues with the subjects' attention towards healthy and adequate behaviors which finally leads them to pursue healthy and correct lifestyles also through motor activity. In addition, the concept of health must be understood and explained in relation to another dimension that is usually associated with the latter and to which it is closely linked: illness, i.e. its direct opposite. The academic contributions that address and explain the concept of health in close relation with its direct opposite, arriving at an interpretative paradigm that never underlines a split between these two dimensions but underlines their close dependence, are certainly those included in the scientific activity conducted by C. Cipolla. The Author, in fact, does not hesitate to maintain the theory that health represents a condition that is truly and only understood in relation to either its opposite, or when the former is missing; that is illness. This is neither the place to reel off a series of definitions around the health/illness dimension, nor the time to retrace the different paradigms that have come and gone up to the contemporary age, which would certainly be reductive. However, there is no doubt that in the light of social transformations in act, and despite the latter, "health is a subjective situation that must be protected by the State from all elements that can in some way hinder its enjoyment; health is understood as a fundamental right towards the State called upon to provide suitable structures and means [...]. The right to health is understood as a social right, which implements the principle of equality between citizens in healthcare; health protection is, according to Article 3 of the Constitution, an instrument for elevating the social dignity of the individual and therefore constitutes the interest of the entire population" (Cifaldi 2010). The right to health, a duty from which the State cannot escape, becomes a primary element to guarantee the social dignity of the individual as an irreplaceable piece in the natural order of the evolution of any society. The need and obligation for society to recognize and safeguard human dignity must go beyond the obstacles deriving from the onset of an illness, from the occurrence of cases of disability, whether permanent or even transitory. Guaranteeing at all costs an acceptable level of quality of life, even in subjects temporarily excluded from the complete enjoyment of their intellectual, physical and psychological functions remains a peremptory duty for every State and for its citizens called to respect and deference towards any form or state of disability. Promoting the process of interaction between elements aimed at guaranteeing social well-being and personalized educational motor paths in disabled subjects always remains a duty that modern societies must oblige to achieved. They could, for example, try to follow paths, such as that of motor activity and of sport, which could be seen as important vehicles and tools for social cohesion and inclusion. Furthermore, it must be highlighted that, regardless of the state of diversity that may derive from conditions of

physical, social and economic disadvantage, everyone has the right to enjoy, through the process of inclusive education, what is a universal right; that is the right to "education". From this perspective, the process of educational inclusion which can be articulated, starting from school and sport, becomes both the premise and the tool on which to anchor a path for building social inclusion (Pavone 2014). The right to inclusive education is recognized internationally. Indeed, all international conventions promote the right to education without discrimination, including disability (UN CRPD 2014). "The fourth objective of the 2030 Agenda launched in New York in 2015 sets the goal to be achieved as -Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all- giving a clear orientation to the road map that will have to guide the policies of international community until 2030. It also marks an important change of pace compared to the previous Millennium Development Goals (MDGs) where greater weight was given to access to education to the detriment of its quality" (Inclusive Education 2013). From this perspective, attention to the health/illness dimension is also seen as an experience with meaning; one which is able to foster and promote interaction and non-discrimination. Therefore, starting from a perspective that also takes into account the academic orientations of modern sociogenesis, Schutz (as quoted by Lonardi) argues that health represents a human experience, "an action that has its own meaning and which, in order to have it, can be neither detached from the people who are experiencing it, nor being separated from the interpretation that the protagonist gives of it" (Lonardi 2011: 322). Following a holistic reading of the dimensions of illness, health, individual, social background, environment, it becomes necessary to consider these dimensions as inseparable. In recent years the concept of health has very much changed. Indeed, the definitions themselves have conformed to the new approaches and models that have been created under the pressure of global organisations, such as UNESCO, the World Health Organization (WHO), etc. The bio-psychosocial model was one of those approaches that most contributed to the detachment of the concept of health from that traditional point of view which for too long perceived it to be a condition of absence of disease and conformity to a cold statistical norm.

Lonardi defines this model as a strategy for approaching the person which recalls the multidimensional conception of health described in 1946 by the World Health Organization ("complete state of physical, mental and social well-being and not just the absence of disease or infirmity") and proposes a systemic vision according to which health is correlated to a multitude of determinants, relating precisely to the biological, psychological and social dimensions (Lonardi 2011: 322). This thought still contributes to undermining the biomedical model by proposing an innovative approach to the concept of health. Moreover, C. Lonardi highlights how within the framework of the said systemic model at three levels, biological, psychological and social, it is necessary for the medical diagnosis to take into consideration, when evaluating the patient's state of health or prescribing a certain treatment, the interaction of the three components or factors. Therefore, this model contemplates a closer look at the patient and his state of disability observed in his environment and integrated with it. As Petrillo writes, it is no longer the fragmentation of the patient, but the unity of the human person in a scenario that is not the background but is an integral part of it.

This modern approach (or paradigm) is characterized by the fact that we no longer observe the system, but the individual instead in all his experience of health, illness and pain. From this perspective, the experiences of the individual subjects who are both observed and interpreted become of indispensable relevance. Their lived experiences are

connected to those of health and illness, as Lonardi writes, giving life to a specific literary trend (the so-called illness narratives), relating precisely to the experience of illness, disability, recovery, life experiences (Lonardi 2011: 322). A sociogenetic model that abandoned and rendered inactive the previous biomedical model; one in fact which is destined to enter into a crisis due to the limits it placed. The bio-psychosocial approach does not consider the body of the sick or disabled person as if it were only a biological entity but, alongside the exclusively biological-medical reading, adds other dimensions of reality, including the social aspect, the psychic and physical reality of the subject, such as elements capable of leading to a holistic and all-inclusive reading of the subject. According to what was written by C. Lonardi, the biological approach explained health in reference to its opposite, i.e. disease, understood as a solely pathogenic manifestation, defining health itself as the absence of disease and as an expression of conformity to a statistical norm (Lonardi 2011: 322). Following this model, the health condition regulated the functionality of the organism without taking into account variables connected to psychological, social and cultural aspects. A. Ardigò, quoted by C. Lonardi, argued that this explanatory model considered "illness as an entity that penetrated the healthy body and, as such, had to be identified and eliminated by medical science" (Lonardi 2011: p. 322). Healing, therefore, was an objective state, declarable only when the initial condition of well-being was re-established, before the advent of the disease. In the statements of Galimberti (cited by Lonardi) the limit of the biological model is well summarized. According to his words, this is a model in which "the medical gaze does not encounter the patient, but his illness, and in his body it does not read a biography but a pathology, where the patient's subjectivity disappears behind the objectivity of symptomatic signs that do not refer to an environment, to a way of life, [...] but to a clinical picture, where the individual differences that have repercussions in the evolution of the disease disappear in that grammar of symptoms with which the doctor classifies the morbid entities, like the botanist the plants" (Lonardi 2011: 322). Against a background that might seem exclusively of medical relevance, the debate around the meaning of health, illness and social integration must necessarily be integrated with a reading that also directly involves the scientific contribution of sociological research; one which interprets health the right to access it and social inclusion as the subject's ability to fulfill a social role. Following this concept, certainly, the sociologist T. Parsons was among the first to have developed a sociological and systematic treatment of the health/illness question. In Parsonian theory, health is defined by starting from its opposite, i.e. disease. Within the theorizations of the sociological current of structural-functionalism, of which Parsons is one of the greatest representatives, the concept of health is closely related to the idea of an efficient functionality of the body; as A. Labisch noted, according to Parsons medicine is the paradigm of the functional preservation of social structures" (Labisch 1997: 572). Moreover, following Parsons' sociological approach, health represents the condition of social normality; "it is the state of optimal efficiency that allows the subject to carry out the social tasks relating to his role; disease, on the other hand, is the state that alters this capacity" (Labisch 1997: p. 572). Parsons defines illness as a form of social deviance, indeed, a form of institutionalized deviance with respect to the social roles that each subject plays, necessary for the functioning of the social system. Naturally, the patient is not responsible for his condition, "but he has the obligation to seek competent medical advice. The doctor has the function of an important social control tool, since it is he who legitimizes the illness and the patient as the bearer of socially institutionalized skills), and

then effectively follows the indications and therapeutic remedies to return as soon as possible to the previous role relationships, recomposing social balance" (Lonardi 2013). However, for this process to be implemented, the role of the State also becomes necessary. The latter is called upon to guarantee and safeguard, through adequate instruments, the right of the individual in a state of illness, whether temporary or permanent, underlining the right of everyone without distinction to concrete possibilities of improving the quality of life, the right to pedagogical and social inclusion. Therefore, by briefly retracing the horizons of the sociogenesis of the health/illness dimension, we have finally arrived over time at the paradigm that dominates the contemporary dimension nowadays. We will not talk about health as the absence of illness, but instead we consider it a process of adaptation to new conditions of more healthy and correct lifestyles. This approach is also revised from a perspective through which the sporting dimension and physical activity take on a non-secondary role designed also and above all for subjects with disabilities, whether permanent or transitory. A process that therefore necessarily also promotes to perceive sport and physical activity as realities that are called on in order to make their contribution as tools capable of carrying out re-educational and socialization tasks for disabled individuals; especially those who require important supports to access knowledge, social exchanges, recovery of one's self-esteem and self-awareness. The pedagogical function of sport can function as a proper tool, the most direct pivot through which to anchor the will and awareness of overcoming social and cultural barriers and promoting the social well-being of the subjects involved and lead them towards a quality of life beyond the expectations that the person in a state of disability may be desired.

Theories on disability: from the ICIDH 1980 model to the ICF model. The social model of disability. Brief reflections.

In previous pages we have briefly mentioned how over time the approaches and interpretative paradigms around the concepts of health and disease have changed considerably. We also argued how these concepts have been approached with new modes of interpretation in order to explain the processes of interaction between the physical dimension of the subject, the socio-environmental construct and the psychophysical dimension. From the perspective of this paradigmatic metamorphosis, the concept of disability, person and environment have also been revised according to a new interpretation at a global level, welcoming new measurement and interpretation parameters. This paradigmatic metamorphosis therefore also affected and involved the dimension and category of disabilities which were included within boundaries and categories not previously contemplated. The purely medical pathological reading of a state of disability gives way to readings capable of including less specialized visions, including social, environmental, and not just personalistic or pathological aspects. We are witnessing an important paradigmatic shift which has inevitably led to the multidimensionality of the concept of health and set its characteristics and its meanings in a continuously, fluctuating social context. Despite there are a vast number of studies on both the notion of disability and its definitions to which theories and interpretative paradigms are often linked, international scientific communities agree in recognizing the existence of two broad categories of disability: the medical model and the social model. The medical model, also known as "personal tragedy theory of disability", is a paradigm that has dominated and characterized schools of thought around disability and its policies for much of the last century. In summary, this model, developed especially in Western

societies, promoted the idea that a disability was a sort of impediment of the subject which could be translated into the loss of functions or limitations. This model has been focusing its attention on both the individualizing elements of the subject and the medicalization aspect. The definitions found in the ICIDH in fact suggest that the state of impairment is nothing but a form of deviance from a biomedical norm. This model thus suggests that each subjects lives their lives according to both their individualistic dimension and their detachment from the social context in which they live. Now, if we proceed with even a preliminary comparison with what can be defined as the disability classification models, i.e. the ICIDH (International Classification Impairment Disability Handicap), which dominated for much of the 20th century, and the ICF (International Classification Functioning), we are widely aware of how the medical, social and organizational approach towards forms of transitory or permanent disability of disabled people has changed over time. The first classification proposed by the ICIDH (International Classification Impairment Disability Handicap), revised several times over the years, was divided into three distinct dimensions:

- Impairment: loss or abnormality of a psychological – physiological – anatomical structure or function

-Disability: limitation or loss resulting from an impairment of the ability to perform an action in the manner and within the limits considered normal for a human being.

-Handicap: situation of social disadvantage, expression of the impact deriving from impairment - disability on the specific social role of an individual (IPCVERRI 2011).

The ICIDH, considered in these terms, represented a sequential model, i.e. the impairment determined the consequent disability, identifying the handicap; specifically, the state of disability/handicap as a consequence of the corresponding impairment.

"The first ICIDH, to clarify the relationships between disease and its consequences, proposed a unidirectional linear flow scheme of the type:

Illness –Impairement -Disability - Handicap

↑"(NERITEAM, 2003)

According to this type of model, health effectively remained a condition that was explained through the absence of disease. However, the proposed model of treatment, as anticipated above, was none other than the figure of the doctor; a device used for controlling social order. Within this context, disability soon became a personal problem as an alteration of the normal state of health. In addition, it also entailed a state of disadvantage, therefore handicap, considered an inevitable consequence of disability compared to environmental standards.

Over time, the limits of this approach became evident since disability could not continue to be traced back to a purely personal issue of the subject. Furthermore, always according to this model, classifiers could refer to the implication of environmental factors and were contextual to the experience of the disabled person. Important debates and a greater need to arrive at less restrictive classification tools have led to the overcoming of the medical model in favor of a different approach where the classification parameters themselves demonstrate changed revisions compared to the past. As a consequence, a new classification model, called the IFC model, is born that will be used to measure and describe the health and disability of a population. The ICF (International Classification of

Functioning, Disabilities and Health) was born following a series of revisions made by the WHO on the ICIDH, and was presented in May 2001 at the 54th World Health Assembly. This is an important approval where 191 countries recognize, in the new logical principles of this model, the new norm for health and disability. The approval of this model constitutes a sort of revolution in the field of disability; one in which the principles that characterize it will ensure that for the first time the contextual and environmental factors in which the subjects live are taken into account. Through the acceptance of the principles of this model, we have signed up to a substantial change in the approach to the condition of disability, establishing a unified language to describe a person's state of health through an important terminological reversal; that is no longer the use of the term handicapped but person with disability. Following this model, there will be agreement in adopting a language and terminologies that are more compliant and non-discriminatory to the state of disability, no longer words such as impediments, disabilities or handicaps but participation, functions, structures, activities; a revolution that will also pass through a terminological revolution. The term handicap disappears in place of participation in order to underline greater attention and sensitivity towards the human aspect of the subject and his condition. Furthermore, the tripartition present in the previous model speaking of impairments, disabilities and handicaps has also changed and is completely erased in favor of the adoption of a single dimension of orientation: disability. The sequential profile present in the previous model gives way to the descriptive profile, i.e. disability is an objective social limitation, regardless of the presence of an impairment; in this paradigm shift, all pathologies are placed on the same level regardless of the cause. The state of health is no longer dependent on the absence of disease, but health is defined as a state of psychophysical well-being at the level of functioning, activity, participation, while disability is the result of the reduction or absence of psychophysical well-being at the level of impairment, limitation of activities and restriction of participation. The care model that characterizes this new approach is the bio-psychosocial model. The latter argues that a disability is no longer conceived as a personal problem but is a problem created by society itself deriving from the lack of interaction of individual beings. This awareness of both the medical-health bodies and the government authorities persuades us to understand the need to direct recovery and action interventions on the environment since the latter is considered the element responsible for the disadvantage. The results that the ICF model intended to achieve can be summarized in the following points: offering and achieving a less specialized and closed vision of the concept of health, going beyond the personalistic sectoralism of the medical model, placing the person at the center of interventions, planning on his needs, interventions within a project of global improvement of the person through an appropriate care model. “This way of seeing disability addresses the problem in the social context in which individuals interact, considering disability a social construction and not (only) the outcome of a mental or physical impairment: “Disablement has nothing to do with the body… Impairment is in fact nothing less than a description of the physical body” (Hughes and Paterson 1997: p. 330). Therefore, rather than attempting to change or fix the person with disability, a social model of disability provides services aimed at removing social and environmental barriers to foster the full social, physical, career and spiritual participation of disabled people (Federici 2007). Social and environmental barriers can be broken down thanks to well-articulated and structured projects in which sport, physical activity, the sense of belonging to a group such as a team, are primary tools through which to help the disabled person to become aware of their own possibilities and resources. The figure of a coach who knows how to

motivate, who teaches people how to believe in enhancing everyone's resources through unanimous participation as a means for achieving common goals represents a significant opportunity. At the same time, the close dialectic between the concept of empowerment and disability cannot be separated by addressing the numerous advantages related to physical activity. There is a well-established and widely articulated literature regarding this concept. In a pioneering study conducted in 2002, Pensgaard and Sorensen propose a model of empowerment in close relation to the sport context by expanding research conducted in 1990 by Htzler. Their objective was to observe and study the concept of enhancement and physical strengthening of people with disabilities within the sport environment. In their study, the authors decided to introduce three different levels of empowerment: the social, the group and the individual level. Following their research, the important parameters for studying the dimension of empowerment in the sport context develop at an individual level, therefore including all the objectives that the disabled person could achieve, at a group level (the motivational climate, collective efficacy and group identity) and, finally, at a social level (the cultural context and political efficacy). All elements which, combined together, would certainly have favored an increase in the level of quality of life for people with disabilities, promoting new opportunities for social inclusion, development and personal growth. Often, both in the sporting and corporate context, we hear about empowerment but, to date, conceiving an all-encompassing definition of the word would certainly be a reductive action due to its vast use in contexts that are often distant from each other. According to the scientific reading given by Zimmerman on the theory of empowerment, we know that the author attributes to this concept the meaning of an orientation value for being able to work and move within a social context. At the same time, it defines the concept as a theoretical model (Zimmerman and Perkins 1995). The value orientation of empowerment, according to Zimmermann, suggests objectives and strategies for implementing change and, at the same time, his empowerment theory provides principles, tools and structures for organizing knowledge (Zimmerman and Perkins 1995). Following his theories, empowerment is a process in which efforts to exercise control become of vital importance. Thus, participating together with others as a way to achieve the objectives set, or even the efforts to access social, cultural and economic resources are fundamental components of the aforementioned theory (Zimmerman and Perkins 1995). In a further contribution of 1995 called “Empowerment Theory, Research, and Application”, the author, together with D. Perkins, highlights the important need to cooperate and participate with others in order to achieve shared objectives and goals. Hence, the effort to access shared resources and the study of the variables and elements of the sociopolitical fabric are the vital components of the concept (Zimmerman and Perkins 1995: 570). In addition, the need to make social actors, sports operators and those who share life experiences with disabled people on a daily basis aware of the value and social capital that can derive from repeated processes of social inclusion through sport and school must be set as a mission that the State and society itself cannot avoid in order to improve QoL.

Towards social inclusion. Improve Quality of Life (QoL) through sport.

In a study published in 2016 on the value of inclusion in sport between disability and participation, F. Kiuppis highlights how in recent years there has been a desire on the part of UNESCO to promote the guiding principles of inclusion in educational systems around the world (Kiuppis 2018). The principle, according to which it is necessary to guarantee

an inclusive education system at all levels, was an objective also recalled in the Convention on the Human Rights of Persons with Disabilities. When we talk about "quality of life" we are referring to a social construct aimed at increasing the well-being of a subject whose positive repercussions involve the entire social community. It represents an important indicator that helps to understand and evaluate the state of life of the person placed in the social, cultural and environmental context. Through the validation and analysis of well-being indicators, it is possible to evaluate the degree of social involvement and the ability to develop potential to improve one's own state. Despite the numerous disciplinary and scientific contributions to the concept of Quality of Life, the latter seems to escape a precise conceptual determination, due to the variety of elements that enter into an exclusion-inclusion relationship in the concept examined; hence the impossibility of providing a definition of the concept that can be considered exhaustive. However, it would seem that this objective limit, in recent years, has been partly overcome thanks to the systematic contribution of international studies and research; particularly the contributions of researchers in the medical and social sciences who have distinguished themselves for having reserved a particular attention and a specific interest in the concept of Quality of Life (QoL). These studies keenly focused on highlighting the need to understand to what extent the study of "quality of life" could induce in order to help institutions in providing services, aid and support s means for improving the citizens' living conditions by favoring a raising social inclusion process and promoting policies aimed at improving the community's well-being. These scientific debates and interdisciplinary discussions led to a review on those studies which focused on the concept of QoL indexed on Web Of Sciences. In light of the numerous reviews that have affected the concept of QoL over the years, the most influential ones were both the research study conducted by Verdugo (2005), and Zuna (2009). As well observed by Brown & Brown in 2009, nowadays the quality of life is associated with those human values which include happiness, satisfaction, general feelings of well-being and opportunities to achieve personal goals and satisfaction (Brown 2015). It follows that the quality of life today, according to what emerged from the studies of Vertugo, is measured by taking into account a series of interrelated and inseparable factors. This new dimension reserved for the state of QoL appears characterized by fundamental domains and elements, influenced by personal characteristics and environmental and contextual variables (Verdugo et al. 2005). Interdisciplinary studies have isolated eight basic domains related to QoL: emotional well-being, personal development, material well-being, interpersonal relationships, self-determination, social inclusion and rights (Schalock 2002; Beadle-Brown et al. 2009; Wang et al. 2010). When these domains come into relation with each other they determine a subject's QoL. The results referring to a QoL can be influenced by a series of factors or variables connected to the various domains. In order to arrive at a relevant and adequate measurement of the "quality of life" index, a holistic and inclusive reading of the various domains is necessary. M. Verdugo speaks, in this case, of subjective and objective indicators (Verdugo et al. 2005). In recent years, the academic contribution of researchers and scholars such as I. Brown, R. L. Schalock, M. A. Vertugo Alonso, has allowed and favored a process of operational adaptation by ensuring that the construct in question became an essential point of international reference for a professionalism interconnected to different disciplinary fields (Schalock 2002; Verdugo et al. 2005; Brown 2009; Reinders and Schalock 2014). This aspect has allowed the concept to detach itself from a theoretical vision of the same, equipping itself with measurable tools and parameters, dividing itself into domains related to an ecological perspective and

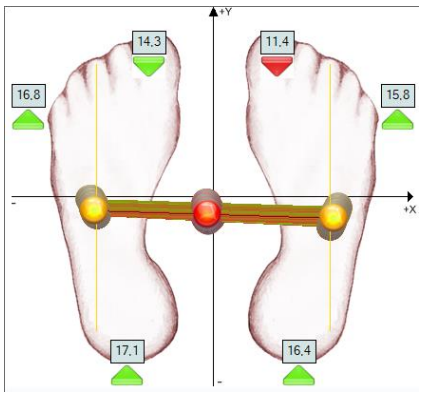
specific indicators. A paradigm that has consolidated over time, becoming a reading tool for the international scientific community. The process of defining the new paradigm was also defined on the basis of the new vision and interpretation of today's concept of health. As already mentioned, the latter now takes on a new dimension no longer and not only considered as the absence of disease, but one capable of taking into account a series of variables that are not only strictly medical but which also include a holistic vision; having as its ultimate goal the promotion of the concept of integrity of the person as placed within the social context. "From this approach follows a pedagogical principle of great heuristic and hermeneutical depth: in establishing an educational relationship with a single subject it is necessary to start from the clear awareness that the personal well-being pursued is complex, articulated, dynamic (Nistor, Anghel and Popa 2024). The educational communication initiated gives rise to processes of a clear systemic nature which, against any inclination of the educator to limit his intervention to a sectoral aspect of the existence of the student, require him to have the ability to correlate the particular with the universal, the part with the whole" (Anffas 2015). For years now, this certainty has been consolidated by the fact that physical activity and the involvement of disabled people in the sporting dimension is an excellent conduit of elements that contribute to raising well-being rates and improving life prospects even in the long term. A targeted and well-articulated program of sporting and physical activities is capable of providing highly appreciable results both in the psychophysical dimension of the disabled individual and in the social and pedagogical dimension. The psychological advantages bring with them a non-negligible improvement in the subject's mood, with a consequent reduction in anxiety and depression and with a rise in the percentages of self-esteem and confidence in one's abilities. From this perspective, the resulting social advantages cannot be excluded. The encounter of disabled people with the dimension of sport and physical activity generally favors new experiences, new relational exchanges, elements capable of counteracting processes of stigmatization and social labelling. In recent studies from 2017, Côté-Leclerc, Boileau Duchesne et al., demonstrate how interest in looking for a job, including physical activity, represents a determining factor for health. It happens, however, that objective limits often preclude the use and optimal performance of physical activity, sometimes compromising its success and the achievement of appreciable results and influencing the quality of life. The same authors argue that to date, although the quality of life also passes through an evaluation connected to participation in a physical activity, we know little about how participation in adapted sports can influence the quality of life of subjects with mobility limitations (Côté-Leclerc et al. 2017). However, the research conducted by the scholars cited has confirmed how good social interaction, involvement in well-balanced groups, cohesion within the group, self-esteem can lead to achieving important social and pedagogical goals. From the data available to us extracted from the cited contribution, out of a total of 34 wheelchair users aged between 18 and 62, who regularly practiced adapted sports, managed to complete the "quality of life" index. More reassuring results were obtained from the structured and semi-structured interviews that the subjects completed. Nine women and twenty-five men who regularly participate in an internationally or nationally adapted were all found to be subjects whose quality of life was comparable to subjects without limitations. The authors thus state that sport, through factors such as the personal ones, social participation, environmental, contextual factors and accessibility, are essential elements for improving the quality of life in individuals with any forms of disability (Côté-Leclerc et al. 2017). The conclusions reached by the

scholars denote that subjects with mobility limitations who practice adapted sports have a quality of life similar to those who have no mobility limitations. It follows that participation in sports for people with disabilities has positive effects on the sense of belonging to a group and a society, on participating in significant activities, and also on the attitude that society has towards people with disabilities. Sport and, in general, sport activity, therefore both represent important means for promoting integration. They also are indicators of QoL by adhering to the educational principles that are necessary to provide the skills and knowledge essential to the disabled person. From this perspective, it becomes particularly important to promote social well-being, that is all those opportunities and occasions in which it is possible to establish and tighten social relationships which have a fundamental influence on the subjective well-being, especially of the disabled person. Feeling part of a group, of a community, represents an unparalleled resource that offers the possibility of inclusion and belonging on a daily basis. Social well-being, understood as the quality of social relationships that each subject can cultivate and objectify within their own community, is the most direct and tangible product that arises from a healthy and fair social relationship between the subjects and the context in which they live. Sport, therefore, becomes the means through which it is possible to connect people with disability with the new context of activity by both educating them and making them aware that in everyone there are the conditions for improving oneself, through new forms of social adaptation that needs to be learned over time. Hence, the movement becomes an unexpected possibility and an educational opportunity. As active member of a group or team, or even when facing challenges, the disabled person compares himself and thus stimulates his own personal initiative. “Motor activity for people with disabilities can constitute a reason for emancipation and growth, since the comparison with others, the verification or immediate perception of one's own efficiency and the refinement of self-regulatory skills, can structure an environment full of possibilities and stimulation meanings” (Gamberini et al. 2007). Sport, as the authors specifies, is an educational strategy to emerge from isolation as it becomes the context where experiment and the objectification of new experiences happen; one through which the individual can improve their self-esteem and self-image and overcome states of fragility inherent to the isolation that the disabled person sometimes experiences. Education to the notion of movement inevitably leads to experimenting with new forms of integration, cohesion, sharing between subjects, stimulating relationships and increasing one's social capital convertible into significant relational opportunities.

New challenges: neuroscience.

The field of Sociology has recently been moving towards new lines of research, opening up to neuroscience. In fact, in the national sociology congress held in Naples in January 2020, prof. Vincenzo Cesareo declared that sociology must investigate and embrace neuroscience as a new research frontier. In fact, performing an action or movement is always the result of neuronal processes that relate the activity of many brain circuits that are not only of the motor domain. The use of diagnostic tools such as functional magnetic resonance imaging or the postural balance platform are a great contribution to the evaluation of an individual and their postural appearance.

Figure 1.



Through he use of the platform, we wanted to understand to what extent the human postural control system influences the emotional-social state and vice versa. The question that arises is: how much is our posture conditioned by the emotional state? Recent scientific evidence establishes a real correlation between sports performance, especially in professional athletes, and one's postural structure and psychophysical and social state.

In fact, through the diagnostic tool of the postural stabilometric platform (see fig. 1) you can see how the individual centers his body and how he can rotate around his own axis. For about 20 years, some studies have evaluated the relationship between emotion and posture using the International Affective Picture System (IAPS) (Lang et al. 1997). This system was developed to provide a series of references through emotional stimuli for experimental research on emotions and attention. The goal is to develop a large set of standardized, emotionally evocative, internationally accessible, color images that include content from a wide range of semantic categories, which may consist of a set of visual stimuli containing images classified on two dimensions: reassuring (e.g. sunsets, landscapes, works of art etc.) and exciting (war scenes, corpses, sex scenes etc.). Furthermore, it was found that the maintenance of postural balance occurs through the integration of the central nervous system. Following a holistic vision, we note how the correlation between the posture, the position/axis of the gaze (vestibulo-ocular) and the occlusive masticatory apparatus establishes a real plan of action, resulting in an increase in efficiency or not. of social relationships and sporting performance. Relatively recent publications have highlighted how through the postural-stabilometric platform it was possible to verify that emotional states can influence posture because the administration of images with positive content led the subject to get closer to the image itself while those with negative content induced a backward posture, that is, they tended to make the subject move away from the slide. These studies also demonstrated another thing that the investigation instrument is important for conducting the experiment. Indeed, the same subjects, in addition to being monitored through the aforementioned platforms, were

examined with a 16-channel electromyograph and in this last case the instrument did not was able to give the same result recorded by the postural-stabilometric platform. This recording difference is attributable to the surface electromyograph instrument which can investigate the superficial muscle chains but not the deep ones which are mainly involved in the control of an individual's postural structure.

Conclusions

In conclusion, we can state that the historicization of the social functions of sport is a necessity, in the light of Merton's "middle-range theories" and of the "sports society", as a relationship and interaction between groups, civilisations, cultures in certain places and precise modes of sport, according to the historical-social intuitions of Elias and Elias with Dunning. The influential book "Sport and Aggression" by Norbert Elias and Eric Dunning (Roversi 1989), allows us to define sport as: "[...] the set of physical-motor activities which: 1) require a minimum level to be carried out of intellectual skill or competence, as manifested in the knowledge and assimilation of the relevant gaming techniques; 2) they have methods of execution that do not depend on the will of the participants and therefore cannot be modified at will, but on the contrary are part of a network of rules; 3) they have their purpose in a final outcome of a formal nature: victory or defeat; 4) they are an integral part of specific social institutions that have inserted them into their production and consumption structures" (Roversi 2001). Sport can be studied as a form of that cultural and communicative process along which a person, for example, learns to fulfill a role, thanks to solicitations, advice, reproaches, suggestions from qualified socializing agents (instructors, coaches, athletic trainers); or again, sport represents a great ritual of channeling violence, through precise rules, such as the duel, the challenge, a final. The different attitudes of the individual (social actor) can also be read with the glasses of neuroscience and develop new theories.

Declaration of conflicting interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author reported there is no funding associated with the work featured in this article.

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Received 14 September 2023, accepted 22 February 2024