Chapter 8

Sport: A Possible Road toward Social Inclusion and Quality of Life

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Additional information is available at the end of the chapter

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Abstract

Sport is a universal language, recognized and shared by all. A psychiatric users Association, in collaboration with public Mental Health Department and UISP, Italian Union Promoting Sport for All, proposes the sport as one of the possible strategies within a wider therapeutic project for schizophrenia. Soft gymnastic, swimming, football, and volley are observed from the point of view of users, main recipients of the intervention, trainers, and referees. The perceived quality of life was measured in the users/athletes, using the WHOQOL-brief schedule. To practice sport enhances the adhesion to treatment and the quality of life and can reduce hospitalizations. It is a useful tool for promoting well-being, personal autonomy and an active lifestyle, preventing isolation, and improving self-esteem and social cognition. It may be an important factor preventing poor functional outcome and promoting recovery. Team sports seem to have a greater therapeutic value, producing fun, cohesion, and social inclusion; they can also play an important educational role, preventing social stigma.

Keywords: sport, schizophrenia, functional outcome, self-esteem, social cognition, quality of life, psychiatric users

1. Introduction

The schizophrenic disorders show a very diverse spectrum for symptoms, manifestations, abilities/disabilities both personal and in the different aspects of relational and social life,

experiences and self-perceiving, and external points of view, including those of family members and practitioners, judgments, and prejudices of society.

The transition from a hospital care model, almost always based on seclusion, to a territorial care model has eliminated the artifacts of institutionalization, allowing to highlight the wide range of individual differences in the onset, course, and outcome of the disease. It is impossible to apply a unique model of approach and therapy; instead, it is essential to work using individual projects, which should be adapted to the evolution over time of the person-disease-care system. In Italy, the model of nonhospital psychiatric assistance is now being implemented by almost 40 years, allowing to accumulate an enormous asset of experiences and expertise in a system in which everyone plays an active role: patients, better defined as users, family members, practitioners and psychiatric workers, associations, schools, and other agencies of civil society.

The challenge of the last years is not the treatment of the symptoms, which, at least for the positive symptoms, finds a wide range of effective drugs: the challenge is to recreate or to build up *ex novo* personal skills and social relationships networks, to find a valuable role in society, and to achieve a satisfactory quality of life. To achieve these objectives is an ambitious, but possible, goal, and requires employing all the available resources. In this context, a psychiatric users Association proposes the sport as one of the possible strategies within a wider therapeutic project for schizophrenia. The main characteristic of this work is that schizophrenic disorders and sport as a method of rehabilitation and social inclusion are observed first of all from the point of view of users, main recipients of the intervention: subsequently, they have broadened the point of view, involving other figures that operate in this project: psychiatric workers, facilitators, trainers, referees, family members, teachers and students, local Authorities, and other associations.

2. Background and caseload

2.1. Population, Mental Health Department and schizophrenia

The province of Ferrara, in the Emilia-Romagna region (Italy), has a population of around 360,000 inhabitants. The treatment of psychiatric disorders is guaranteed by the Local Public Health Agency of Ferrara, through the Mental Health Department (MHD), using the community care model. The territory has an important feature in offering personalized care paths and on relies to hospitalization only in the case of onset of acute symptoms that cannot be treated as outpatients.

The treatment path uses different instruments: medical and nursing interviews, drug therapy, psychoeducational groups, cognitive groups, expressive therapies, family intervention, and proposals for enrolling in specific training programs stage.

People affected by schizophrenia spectrum disorders are diagnosed and taken over by the MHD Territorial Service, which starts a personalized treatment plan and carries it on over time,

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referring also, where necessary, to rehabilitative semi-residential or residential programs or to short-term hospitalization (average 11 days) in acute pathology ward. In recent years, it was also initiated a very interesting departmental project of early intervention for psychosis [1].

In 2009–2010 [2], a systematic evaluation of all people affected by schizophrenia spectrum disorders [category 295 of International Classification of Diseases (ICD9)], in charge of the provincial MHD, allowed to get several important and useful information. The cases were 842: 486 males and 356 females, with an average observation time of 13 years.

The research considered both symptoms, evaluated using the Brief Psychiatric Rating Scale (BPRS) 24 item [3] and personal/social functioning evaluated using the Personal and Social Performance Scale (PSP) [4]. Only 5.3% of cases showed severe symptoms versus 78% of cases asymptomatic or mildly symptomatic. Conversely, the evaluation of personal and social functioning evidenced, in the sample, a widespread situation of disability, with relevant difficulties in one-half of cases in the work/social utility area and in personal relationships area. There were statistical significant gender differences with males less able than females.

A very important result of this research is that course and outcome of the disease are not affected by early onset or long disease duration: the possibility of improvement or healing exists for all cases, even those with a long history of illness and hospitalizations.

2.2. The psychiatric users association

Club Integriamoci NGO Association, based in Ferrara, was founded in 1998 by a group of psychiatric users and former users, psychiatric workers, and volunteers.

In the early years of the association, the psychiatric workers have provided a constant presence and played a very important role, supporting users in their path toward autonomy: they started activities, participated in them, and identified the most suitable users carrying out management functions or activities conductors. Many activities and projects were also financially supported by the MHD. Over the years, manual and craft activities have been carried out, especially for females and a 3-year theater project as part of a European project of which the town of Ferrara was partner.

Currently, the Association is completely managed by the users, who hold all the management positions, perform administrative functions, and take all decisions as a group and plan together the activities and initiatives. The main activity of the association has always been and nowadays is to practice sports, in collaboration with the Mental Health Department, the UISP (Italian Union Promoting Sport for All) and the Municipality of Ferrara. The Association participates in further outdoor activities, especially hiking, walking, and bike riding, as part of a regional project ("Moving Citizens 2") that promotes physical activity outdoors.

The Association undertakes activities of information and contrasting stigma, especially in high schools: testimonies, but also volleyball or football matches. Moreover, it participates in regional sport tournament and collaborates with different NGO Association in ethical projects.

3. Method

The Mental Health treating team performs the referral to the sport activity with different objectives as to promote health and physical well-being, to motivate social participation and prevent isolation, to have recurring weekly activity, and to socialize or to promote specific personal and relational skills or social integration.

The technical aspects of training are supervised by professional coaches provided by UISP, while the weekly organization and conduction of sports activities, initiated by psychiatric workers and conducted by them for over 10 years, are since 3 years assigned to a user with specific training as a social facilitator, who is always present. The facilitator is a user who has achieved a good level of clinical stabilization and who is perceived by other users as an ally, able to understand their feelings, because he too has had experiences. At the same time, he is the referee of fairness of play in the field and guarantees the respect of sporting rules; he acts as a mediator among the athletes and acts as a liaison between them and the MHD staff.

The psychiatric worker, belonging to the MHD semi-residential rehabilitation center, collaborates with the social facilitator for the implementation of sports activities and works together with the caring team when admitting the new users/athletes; she supervises and maintains links with MHD and regional sports groups. Facilitator and psychiatric worker together reinforce the results obtained with the sports, promote self-esteem, create the conditions allowing everyone to feel at ease and find a role in the activities. They closely cooperate in the organization and coordination of activities, as required by a specific protocol of collaboration.

Sports activities as part of a therapeutic rehabilitation project are currently four: at an individual level, gymnastics and swimming in the pool, and as a team, volleyball and football (5 or 11 players). To these activities take part weekly about 50 people, males and females, aged between 20 and 64 years, with different psychiatric disorders; schizophrenia represents more than half of the diagnoses. Many users/athletes practice currently more than one activity.

All sports are practiced at least once a week; in addition to this, we organize and take part to social events and regional sport meeting. At least once a month, the volleyball and soccer teams play against teams of high schools, as part of a project aiming to educate young people and fight stigma. Sport activities are subject to either external observation—by professional coaches, psychiatric worker and facilitator—and self-observation by athletes themselves. In team sports, the end of a session of training is often followed by a time of reflection, informal but very effective, where the team group examines the progress achieved and any difficulties encountered, and programs the next workout or the participation in tournaments.

To gather more information, the point of view of users athletes has been audited in 2016 with individual interviews and using the World Health Organization Quality of Life (WHOQOL)-brief schedule, 26 items [5], to get information about the perceived level of quality of life.

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4. Sport

"Sports have the power to change the world. It has the power to inspire, the power to unite people in a way that little else does. It speaks to youth in a language they understand. Sports can create hope, where there was once only despair. It is more powerful than governments in breaking down racial barriers. It laughs in the face of all types of discrimination" said Nelson Mandela in 2000 [6].

Sport as an ideal value [7] was born in ancient Greece, where the Olympic Games were the occasion of peaceful encounter, and not confrontation, among people who recognized themselves in a common identity, while belonging to different political or social systems. During the games, conflicts were suspended, gift was exchanged, and all people had to follow common law, as the possibility of participation for all; misbehaviors were prevented or punished.

In contemporary culture, sport is a total cultural phenomenon that has transformed social customs and even the clothes; it involves everyday life context, it is magnified out of proportion by the media, and it reflects, at a different level, the same problems and contradictions of the society. It is no longer a value in itself; rather it is often a source of conflict, confrontation, and aggression.

It becomes a "value" only within an ethical and educational context, when it takes a positive social meaning and promotes the good of the community and the improvement of relations among its members [8]. The Recommendation on the European Sport for All Charter, adopted in 1992 and revised in 2001 [9] defines sport as a right for all citizens, of which the States must be guarantors; moreover, it recognizes "the diverse contributions which sport can make to personal and social development."

For people with disabilities, whether physical or mental, sports are not always easy: it is necessary to overcome resistance and personal or environmental barriers. Sometimes, one has to use devices, or even build them. Sometimes, it is necessary to adapt the rules, so that they may become accessible, to find the facilities but, above all, it is essential to find organizations available to welcome individual athletes or groups of athletes with disabilities and their needs. For isolated people this is very difficult; the presence of corporate associations, connected in a network of associations, increases the possibilities and sport opportunities.

In physical disability, injury or sensory loss is visible and obvious; in this area, sport is now universally recognized as a therapeutic, rehabilitative tool of socialization and inclusion. The high costs of devices are certainly an obstacle, but there is usually a strong motivation of the athletes, their family and social environment. Adapted Sport [10] plays an important role both at school and in leisure and free time, while the Paralympics events [11], with their large participation of athletes and public, are a powerful media instrument of sport values in conditions of disability.

In mental disability, impairment is not immediately visible, and devices are not necessary, but it is often necessary to adapt the rules of the different sports. In most cases, sports activities

are carried out within the Psychiatric Services, for recreational and therapeutic purposes; for young people, there are special projects in schools, especially in high schools.

Networks of Associations promote sport at a regional level or national one: some Associations are strongly characterized in the health-psychiatric domain (i.e., ANPIS, Plural Sport Association for Social Integration); others operate in an "external" field the civil society. Among these, the UISP is the most common, but there are many others. Intellectual and Relational Disability Federation (FISDIR) is affiliated with the Paralympic Committee.

The concrete work in this area is extremely widespread, at least in Italy, with a wide range of popular sports: athletics, gymnastics, swimming, skiing, sailing, canoeing and rowing, archery, bocce, judo, tennis, table tennis, football, basketball, volleyball, and rugby. In our limited experience, we are aware of a dozen soccer teams and more than twenty volleyball teams, we have reports of various regional tournaments and even a regular UISP championship, in the Piemonte Region.

4.1. Our practiced sports

4.1.1. Soft gymnastics

Soft gymnastic was born in the seventies of the last century, as a set of activities aimed at finding a harmonious relationship with the body and the environment, through a conscious and active working attitude. It is a misleading to consider it as an application of traditional exercise in a reduced scale, for “weak” people.

Our body is very sensitive to anything that can alter its equilibrium. If one makes a pleasant experience and enjoys feelings of well-being, it will try to reproduce these feelings in an unconsciousness manner; on the contrary, bad experiences and unpleasant feelings will lead to painful muscle contractions and poor posture. Therefore, it is important to learn to feel and know every sensation coming from the body, to become aware of the movement, and to adopt personal strategies contrasting physical and psychological distress.

Anyone can enjoy soft gymnastics, regardless of age, even in non-homogeneous age groups; the perfect setting for these activities is a heated gym with a wooden or rubber silent floor, in order to favor listening and concentration. There is no need for special equipment, except for mats and small equipment, such as balls or tennis balls, which facilitate the work on the perception of the body.

Our gymnastics groups, attended by about thirty people, males and females, are held weekly and are led by a UISP teacher with special training. Each lesson lasts between 50 and 60 min and is divided into three sections: worm up, work, and cooldown. During worm up, we execute full body preparation exercises, aimed at further improvement of equilibrium, muscle tone, coordination, and proprioception. After the warm up, there is a phase in which participants stand in circle to be able to face each other. This produces a greater degree of harmony and the creation of a group in which all feel an integrative part.

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Exercises and movements are taken from different techniques, all aiming to restore the psychophysical equilibrium and the harmony of the body: Eutonia, or Alexander method [12], Bertherat "anti-gymnastic"[13], Feldenkrais method [14], and Stretching.

The final phase, body relaxation, allows to reach a physical and psychological well-being. We also use music as a basis to facilitate individual expressiveness and build a body-mind feedback that generates positive reactions.

The teacher carries out both an individual and group observation, periodically evaluates eventual problems, improvements and acquisitions of skills, highlighting especially the qualitative aspects of the movement. Other objectives of soft exercise are to improve psychological well-being and ability to manage stress, to reduce anxiety, and to improve self-esteem and social integration. An important goal is also to create a positive and welcoming environment, encouraging the formation of a good group, and allowing to achieve harmony and well-being among all participants.

4.1.2. Swimming

In swimming, the main factor is water, with its physical characteristics (hydrostatic pressure, temperature, buoyancy) that interacts with the body. Our classes, involving 12 people, males and females, are conducted on a weekly basis in an indoor pool, 1.30 m deep, under the guidance of a professional UISP instructor. The sessions include a technical phase, in groups, related to different swimming styles (crawl, backstroke, breaststroke), and a phase of free swimming for those who have already acquired skills. Also diving activities are carried out in group, in a circle, and so is final relaxation, using schemes like the horse water or the fish star.

A preliminary difficulty, for some people, is made up of having to undress, and show a body that does not meet the prevailing standards of beauty, or a shape which is different from your "ideal" body, that of youth or before illness: leaner, more muscular, straighter, maybe more tanned. Some women have implemented an effective strategy to deal with this problem, wearing different costumes, such as those for diving.

To get in the pool is, for some people, an already known experience, mostly pleasant: they are good swimmers and they are happy to be in the water. For others, it's a new experience and it can also be scary for the loss of contact with the earth, for fear of sinking, for the difficulty of letting go to support of water, and for the loss of the usual boundaries.

Once entered in the water, the cutaneous perceptions change: most of the body surface is no longer surrounded from the air, but by a liquid, which exerts a pressure on the skin, and which has a temperature that may be important for the purposes of the first adaptation.

People must also deal with the effect of buoyancy on every single human body, depending on the shape, the weight and body density: some parts tend to float and others, with a greater relative weight, tend to sink. Flotation entails a different equilibrium, which will vary with the slightest movement, inducing continuous adaptations in the proprioceptive perception system. This changes completely the entire movement control and coordination, according to new parameters, not usual in a "dry" environment.

The decrease in the gravity for the effect of water leads to a feeling of lightness, which is generally pleasant. For the same reasons, this environment is particularly suitable for mobilization and a gradual cardio-respiratory training in people with weight problems, condition often associated with psychotic disorders, especially chronic.

Among the benefits of the activity in the pool, we note especially the possibility of enhance movement and coordination and the feeling of psychological well-being, helpful in decreasing anxiety. To attend a swimming pool, with its rules of use, helps to take a greater care of self. In addition, being able to carry out a complex activity and learn new skills improves self-esteem, while to take part of a group fosters communication.

4.1.3. Football and 5-players football

In our Association, currently, we have only male players: fifteen people with age ranging from 21 to 57 years (older people are goalkeepers). Football is a sport that readily attracts new young users, as known and socially widespread and appreciated. In the version with 11 players, it requires good physical condition and enough breath to run across the field, as well as a certain level of technical ability. Everyone seems to have previous experience; they all had play as children: on outdoor courts, at school or after the school.

In the 5-players version of the game, the field is much smaller, and the spaces are narrower, with more frequent contacts among the players; breathing capacity becomes less important, while control of the ball and quick overview of the field, teammates, and opponents becomes more important. The game is dynamic and fast, and there is the possibility of some injury due to the accidental knocks or falls; risks of accident are taken into account from the very beginning. The main problem of football is the physical contact between players, and its possible meaning—not openly declared—of aggressive behavior.

In our team, the starting rules, shared and accepted by all, are simple and clear: to play for fun and you can win or lose; it makes no sense to get angry with you or with teammates. Teams are not fixed, but they are decided from time to time. The instructor looks after the technical aspects, while the facilitator is the guarantor of fairness in the field. If the aggressiveness increase, the facilitator gives a first call; then, if the problem persists, he stops the game and sends all in the locker room.

The football team plays once a month against a representative of the Ferrara Scientific High School and participates in several tournaments in the area of Mental Health or during local events.

4.1.4. Volleyball

More than twenty people take part to Volley activity, males and females, aged from 27 to 60 years. This sport is easy to understand: at the basic level, people of all ages and fitness levels can participate, sometimes eventually using small adjustments, such as the stroke from inside the field.

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Volley promotes correct behavior in the field and the respect of the opponent to the point that the team who protests or offends the referee loses the point. It has also the great advantage of keeping teams separate, each in own field, with a net between the two teams and the two halves of the field. The net allows to see the opposing team, but there is no body contact; only the ball can pass from one field to the other, always in the air, in flight; who let it drop loses the point.

The error is a normal occurrence in the course of the game: the team who makes fewer mistakes wins the match. It is an exquisitely collaborative game: all players bring a contribution. To know the playmates and their characteristics increase the chances to play well and successfully. The continuous rotation of positions, then, allows to experience different points of view of the field and to adjust to different actions companions.

Many factors come into play, such as structure and physical fitness, technical skills, tactical sense, spatial orientation, ability to predict the moves of others, ability to communicate, and understand each other and help each other in the field.

In our team, all players participate in the game: when there are more people than 12—the sum of two teams' players—we use to change a player at the time of stroke, thus allowing everyone to play. Who is not in the field at that time participates as audience. Every successful action is applauded, and people with less technical skills are strongly encouraged and applauded when they manage to keep the ball in play.

The Volleyball team regularly plays with teams of the city's high schools and participates in several tournaments during the year. In recent time, we evolved to a more engaging level of play, attending to the UISP National Championship.

5. Results and discussion

Exercise, physical activity, sports, health, mental health, psychosis, and therapy: how do these concepts relate each other? Physical activity, health, and quality of life are closely interconnected [15]; to practice sport with friends, colleagues or family do have a positive effect increasing social asset [16]. On these issues, there is a common consensus, so that Regions and States define policies to encourage physical activity. It is also generally acknowledged the positive effect of exercise on mental health, in particular on self-esteem and mood, but it is not clear whether carry it out in the open air is a further advantage; greenspaces of high natural and heritage value seem to add an extra benefit [17].

In severe psychiatric patients, exercise seems to produce an improvement in the symptoms both positive and negative [18] and quality of life [19]; in some individuals, exercise may be a useful coping strategy for dealing with positive symptoms, such as auditory hallucinations; moreover, it seems to associate with an alleviation of negative symptoms such as depression, low self-esteem, and social withdrawal. Aerobic exercise positively affects cognitive performance in hospitalized subjects, suffering from schizophrenia or depression [20]. Physical activity in severe psychiatric disorders helps to prevent metabolic and cardiovascular diseases [21], improves the satisfaction about the body and self-esteem [22], and is used as part of a multi-

functional rehabilitation treatment in schizophrenia, although the negative symptoms may hinder the program, reducing the motivation and causing dropouts [23]. The exercise of an overlearned physical skill, as biking, improves brain connectivity in patients and healthy individuals [24]. While in the review by Patel [25] on a wide range of mental disorders, the effects on schizophrenia are defined as "not known," the review of Soundy et al. [26] lists the possible benefits of sports activities in this disorder, and the Firth et al.'s review [27] concludes that a moderate to vigorous exercise for about 90 min per week has a therapeutic effect by decreasing cardiovascular risk factors and reducing the psychic symptoms.

The literature offers heterogeneous works, using a wide range of exercise (aerobic, anaerobic, sports) in different contexts (inpatients and outpatients), with fairly short follow-up times and limited samples; currently, it is not possible to generalize the results, or choose an activity over another, only according to the literature.

Physical activity, exercise, sport are they synonymous? In our opinion, they are not. Physical activity and exercise, at least how they are described in many works, pose as major goals the physical muscular mobilization and the cardio-vascular prevention. The concept of sport, in our view, is different: it means to deal freely with rules shared by all those who practice it, healthy or sick; it means trying to play technically or with a good performance, in a controlled environment, aiming to improve. It means, in team sports, interfacing with peers and with opponents and dealing with mistakes and defeats as part of the game. Finally, it means tackling success without humiliating opponents. Sports are leisure activities, strictly linked to concepts such as fun and enjoyment, which also constitute the main motivation to maintain the practice [28, 29].

Can a person with schizophrenic disorders deal with all it? If it does, may he/she encounter difficulties and advantages that can face? In summary, what are the specific therapeutic factors? The literature indicates the presence, in the schizophrenia spectrum disorders, of both neurocognitive deficits and social cognition deficits, related to each other but not overlapping. The neurocognitive deficits have a role in influencing the "functional outcome": self and interpersonal behaviors and skills for independent life; they can concern attention, short or long-term memory and the ability to solve problems. The Social Cognition concerns empathy, the ability to recognize and understand emotions and feelings of others, and also the ability to infer intentions, beliefs and desires of other people [30–32].

Cognitive deficits appear related to negative symptoms and a poor functional outcome: being able to modulate the functions of social cognition may be an important factor in determining the outcome of the disease and in promoting a full recovery [33]. Sport can be one of the strategies.

Sport can be one of the strategies to improve both neurocognitive aspects and social cognitive abilities. In this context, Corretti et al. [34] propose sports as a useful tool in every stage of the disease: pre-acute, post-acute and even chronic.

From our point of view, that of an users' association, we have no direct information on the effects of exercise or sport on the pathogenesis of schizophrenia: our intervention begins when the disease is overt, when there is already a diagnosis and a therapeutic program.

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Our experience confirms some literature data: some of our athletes report that the sport has provided them some tools to better cope with symptoms as hallucinations, especially auditory: to fix the attention on other bodily perceptions, or on the current game in team sports, antagonizes hallucinations and decreases their disturbing effect. In team sports, the habit to trust others and the self-esteem improvement are effective antagonists of some delusions, particularly those of persecution.

5.1. The users' point of view

In over 15 years of sporting activities in the area of psychiatric disorders, especially schizophrenia, we have accumulated a wealth of experience. After several interviews with our users/athletes, we would like to try to use their words to a "collective" description of their experience in the disease, and subsequently in sport.

5.1.1. The experience of illness

When you get sick of schizophrenia, the world falls upon you: everything is confused, your head is filled up with noise, you do not recognize the person you were before and even your environment; you do not know who to trust in. Above all, you do not know what is happening to you.

Family members and friends see you strange, they eventually could think that you take substances (sometimes, it is true), but the strangeness remains even when you are "clean". Some people pity you or are ashamed of you; sometimes they get angry and you get angry too. No one knows what to do.

Sooner or later you obtain a diagnosis and someone takes charge of you. Therapy begins: at least, the radio in your head lowers the volume, maybe turns off, but you have to deal with the medicines every day: now you are, first of all, a sick! Sometimes therapies bother, to find the right dose and the right drug is not always easy; sometimes you're too sedated and you look like a zombie, sometimes you get fat and bloated, or stiff and walking like a robot, or your hands and your mouth shake. Everything is treatable, but in the meantime you seem even stranger.

Your family members begin to protect you a bit too much, to treat you like when you were thirteen. Sometimes, they think you are doing it on purpose, that you spoil the situation, that you don't help yourself enough. Even to pronounce the name of the disease is very difficult: it is better to talk about "depression" or "nervous exhaustion": people can understand it. And you wish to have another illness instead of this, any: a broken leg, pneumonia, anything but that.

You start to look for the "guilty" of illness: another disease, a sentimental disappointment, a lack of work, a failure in the studies. Sometimes you think that the diagnosis is wrong, the doctor is incompetent, and "the pilgrimage of hope" begins, towards more and more well-known and expensive doctors or faraway places, where perhaps a miracle will happen.

In all this, you become more and more passive, and more and more really depressed: ill, chronically, considered untreatable, you feel useless and you hide from previous friends and

you run out of your previous life, so that no one could see how much you are changed. Only in your room you feel safe, even in the dark and with the music on headphones. Even complaining does not work: there is always someone who does that before and more of you.

Every business and social relationship loses its meaning, the sense of emptiness is spreading, it is difficult to express in words. It seems that nothing interests you, even if, within you, emotions and fears are pressing. It's hard to pay attention, to decode the expressions of others people: you search isolation so not to be injured. If in your life "before" there were plans, expectations, hopes, now, in the limbo of disease, the idea prevails that everything will always be the same, or rather will only worsen.

Sometimes we get stubborn, but then we accept to follow a therapeutic process where everything is very structured and encoded and disease-related: it continually reminds us of the disease. There is not much room for fun or for personal initiatives, but then, when we have to go outside in real - not protected - world, there we must to walk alone.

5.1.2. The experience in sports

Soft gymnastic is often considered mostly as exercise, whereas all other activities are considered and lived as sports. All interviewed user-athletes expressed a positive opinion: they are happy to play sports and think it is a useful tool for them both physically and psychologically. All users emphasize the importance of working together within a group, also in individual activities, and find a good social environment, which allowed the development of better social relationships and friendships.

The main reported benefits of gymnastics and swimming are to improve agility and muscle coordination, to reach a greater satisfaction with the own body and a feeling of well-being; in swimming, they are also enhanced by learning new skills and improve self-esteem overcoming fears. In team sports, the main positive aspects are fun and the feeling of belonging, in addition to the opportunities for tournaments. The rare reported difficulties are in football, for the management of aggressiveness. In volleyball, there is a great sense of teamwork and pride for the ability to face and overcome obstacles and the ethical and educational values of which the team is witness. There is a general demand for a more frequent activity, as a source of great personal satisfaction and good social relations.

All athletes emphasize that, when they are within the sport, they completely dismiss the sick role, and they feel only people, citizens and especially athletes. This allows them to improve their self-esteem, and even increase in value with respect to the family and the environment.

5.2. The role of sport in the therapeutic project

What needs can be met in the sport, and what are consequently the objectives? Well-being, skills, to avoid isolation, to build activities for leisure, to deal with other people, to improve self-esteem and quality of life, to acquire autonomy. The different activities offer varied opportunities and have different indications and features.

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Gymnastics, for example, can be a preparatory: a good start for those who do not move since a long time and have to learn to well perceive their body. It is a good motivation to leave the house, and does not require an excessive involvement in social relations, although it provides the opportunity. For people who continue to practice, it is a useful tool for physical well-being, posture, equilibrium, self-knowledge and anxiety management.

In swimming, the more specific aspects are weightless and floating: it should be interesting a further investigation about the specific effects of various bodily perceptions in the aquatic environment and their effect on body image and on perception system in general, so often impaired in schizophrenia. The acquisition of new skills and the achievement of objectives increase self-esteem, while the informal moments can provide a "play area" that allows exercising relational skills.

Football, the most popular sport in the country, both as a practice and as interest of individuals and the media, is also the one who, in the literature, seems to receive particular attention as a therapeutic rehabilitative tool. Battaglia et al. [35] studies football as an additional treatment in schizophrenia, and Masala et al. [36] describes a training protocol for football in this syndrome. Football, however, forces us to reflect on the significance of sport: it affects huge economic interest; the overpaid players, very popular, can convey positive social values but also negative. Some famous players often express in the field behaviors that would be considered highly symptomatic of mental disorder, off the field. Intolerant, provocative, threatening, aggressive, simulators; in the face of all this, they are not strongly discouraged, recalled or punished. Admonitions, expulsions and disqualifications, but then they come back and behave exactly the same way. There are matches that look like gladiator fights: faults, yellow cards, expulsions and all players exaggerate the effects of contrasts; in the meanwhile, speakers repeatedly define the game with adjectives like "hard," "aggressive," "male," all presented as positive and praiseworthy. Some fans, then, go to see football as if they were going to a battle: framed in organized groups, often armed with assault weapons, ready to destroy "the enemy" and everything they find on their way.

How can we reconcile these dis-dominant values with a sport practiced in view of psychiatric rehabilitation, with ethical and educational values? It is not always easy: there is a conflict. Almost all football teams we know were faced with this difficulty: some of them have found strategies to deal with it, others (especially ones inside the Psychiatric Services) preferred to channel the energies on other sports. We are however convinced that aggressiveness challenge can be addressed and overcome. That indeed is one of the most important goals of our activity: to learn how to deal with our and others' aggressiveness and overcome it. When we play in schools, one of our goals, in addition to combating the stigma, is to give a good example of an ethical and educational way to play the game of football.

In his very interesting and documented work, Carboni [37] defines the football as "a cognitive gym" useful to reach psychosocial health goals. For us, this happens especially with the volleyball, the sport that gives us most satisfaction, the one where you go to training half an hour before, and later you stay there chatting, joking, and making plans with your playmates and friends. It is our "cognitive fitness," this sport easy to learn, good looking, flexible respect to the number of players, cheap because you can play almost anywhere, even in the public

gardens and on the beach. Few experiences are reported in the international literature, but they all are very positive [38, 39], even in the adapted version of sitting volley [40].

The volleyball allows improving a lot of cognitive skills: attention, spatial orientation, perception and recognition of a range of situations, decision-making skills, strategy: it is a problem-solving training in a context of play, which fully satisfies the Rasmussen general pattern of human activity [41].

"Was I wrong?" "Have the others been better or smarter than us?" "No problem, try again and see if it works, with a new strategy, or even the same as before, but better applied." It is no coincidence that the tradition of the game suggests to newly serve the player who has made a mistake, in order to give him/her the opportunity to rebuild and regain confidence. Point after point, play after play, self-esteem and ability to cope with the emotions grow together with the sense of the group-team. The players reflect one each other as in a mirror; following the mirror neurons theory [42], this means to communicate and to understand each other better and better. Meanwhile, people get used to work in an organized way, to come out from the isolation and to look around: it really means a training for life.

5.3. Outcomes

5.3.1. How is effectiveness measured?

A first indicator may be the number of hospitalizations: people practicing physical and sport activities require fewer hospitalizations than when they were inactive; some people decreased from 4 to 5 annual admissions to one or none. During the past year, in the group of users athletes there were only four admissions: one in the ward for acute symptoms, which lasted 2 weeks, and three, in three different people, in facilities for intensive rehabilitation programs.

A second indicator may be the adhesion to the treatment in general and, in particular, to sport classes. We do not remember, in the last 5 years, the necessity of Compulsory Admissions in people who attend sports groups; in our opinion, this means that users become more aware of their own care and they are more participating and reliable in applying it. The drop-out in sport activity is rare, usually due to external causes: family burdens, work activities, physical illness or injury. Often the injured or convalescent athletes will participate to the gym classes, to cheer their friends and even to play a useful role as "external" observers.

A third indicator is the user-athletes satisfaction and their families: sport activity is very appreciated by the family for the promotion of personal autonomy, independence and for its socializing value.

Even high school students really appreciate the opportunity to play against our teams, and their teachers feel these activities as very qualifying and deeply educational.

An external observation is provided by the interviewed referees: they all highlight the fair play of MHD teams. Furthermore, they describe a feature that makes us very happy: they knew nothing, before, of mental disorders, they expected to referee matches of very low level, and

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they were pleasantly surprised to find a good knowledge of the rules, a decent technical level, a pleasant game, surrounded by a great enthusiasm.

5.3.2. Quality of life

The perceived quality of life was measured in the group of users athletes, 51 people, 30 males and 21 females using the WHOQOL-brief scale 26 items. All schedules are valid.

The overall quality of life is perceived in all cases as "good" or "very good" and only 12% of people are dissatisfied with their own health.

The level of physical perceived health is high: the majority of cases declare that they feel well, without pain, full of energy, able to cope with their daily activities; many people have a job. They need some treatment, but they don't consider this as an impairment.

Psychological health level is high, too: only 6 people are unhappy about their appearance, they are mainly self-satisfied and able to concentrate. The majority think that life is pleasant and meaningful. None of the athletes-users felt always or often discouraged, in the last few months.

Information, mobility, safe and security, place where they live and transport does not show any kind of dissatisfaction or problem, but the financial resources are very limited, just enough to cover the needs, in 65% of cases; it is difficult to engage in leisure activities for a lack of money and time.

They are very satisfied for the support received from friends, quite satisfied about their personal relationships, often unsatisfied in the sexual activities area.

Overall, the perceived Quality of Life looks good and it is very significant that it is also good in the Domains most at risk in schizophrenia: Social Relationships and Psychological Aspects.

6. Conclusion

Sport is a universal language, recognized and shared by all. It promotes well-being, self-esteem and social relationships, it improves compliance and fosters an active attitude of the users/athletes; no one feels excluded.

We think that sport is a very useful and inexpensive tool in the overall frame of the treatment of schizophrenic disorders. During the first definition of the therapeutic program, sport promotes the establishment of a good relationship with the treating team and improves the adherence to treatment. It introduces the new users, especially young people, in a friendly and fun environment that helps them to overcome many misconceptions about the role of a "psychiatric patient," by seeing other people, who are users and athletes, well integrated into society. Moreover, it is an appropriate form of secondary prevention against chronic medical conditions related to sedentariness, avoiding weight gain and its deleterious effects on health, quality of life, general functioning and compliance.

In a subsequent period, it becomes targeted to specific needs of individual cases and assumes a greater significance as an effective tool for psychiatric rehabilitation, easy to implement and inexpensive. It can reduce the hospitalizations, improve Social Functioning, achieve a good quality of life, promote social inclusion and functional recovery. Schizophrenia is not a malignant disease that inevitably deteriorates over time [43]: we must work to promote recovery in every single person.

Sport allows gradually regaining a role in a social environment and finding a life domain where the disease remains outside. In our opinion, team sports have a high therapeutic value. The team is not a sum of individuals, but a unique "entity." In an ideal society, the individuals fade away and the players become a "single body" whose parts interact each other. The stronger parts support the weaker parts; the resources of all are at stake and enhanced to create that Universe-Group which aims to get the best result. Play on a team means to know and apply the rules of the sport, find the correct position on the field, learn and use specific technical skills, collaborate with others, respect fellow and opponents. The victory is a moment of cohesion and sharing of positive emotion: the result of everyone's work; even the defeat, though, is constructive, producing reflection and the reorganization of the work of the team. It is not a rewarding experience, but it's definitely a growth factor and analysis: sport teaches us to accept failures as part of a learning process or as one of the factors of the game.

Fitness, technical skills, attention, observation skills, and willingness to cooperate: these are all important factors and build expertise and resources that, if exploited, give a role in the team and increase self-esteem. Within the teams, valid relationships can grow and continue beyond the classes, producing autonomous leisure opportunities.

In our opinion, sport “treatment” combines the features of the clinical work, of clinical research and of self-help systems. We think that the treatment of schizophrenia requires a personalized approach, which evaluates the characteristics and needs of each individual: this also applies to exercise and sport: we always prefer the concept of “sport” to that of “exercise,” for its value on self-esteem and social integration. In our experience of users, we suggest starting out, especially in the post-acute phase, with the proposal to an individual activity such as gymnastics, allowing a period of observation and adaptation to the movement in a friendly but not too-demanding environment. Subsequently, we propose to try an additional sport, according to the therapeutic needs and preferences of the individual subject; after an initial phase of welcome, the user will continue to practice weekly, at least for a year. Many users continue to practice sports for years, when they are symptoms-free and also after finishing their course of treatment, as volunteers.

Our and others experiences using sport in the treatment of schizophrenia may act as suggestion and encouragement toward a research centered on outpatients, using shared outcome indicators and providing for a sufficiently long follow-up, to evaluate the persistency of benefits over time. It would be very interesting also to carry out research on the different sports and on their various potentially therapeutic factors.

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