

35 - EVALUATING THE SELF-CONCEPT OF JUVENILES WITH DOWN SYNDROME THAT ARE PARTICIPATING IN A PROGRAM OF NATURE SPORTS

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1 - INTRODUCTION

This work had the main objective of developing sports practices using nature ambients and to test the Self-concept, identifying the physical, social and psychological benefits for students with Down Syndrome. The work was approved by the Ethics Committee of the School of Medicine of Unicamp. Besides that, 16 assistant students of School of Physical Education of Unicamp had assisted the research. The methodology used was chosen among others methods of testing the Self-concept. In this way, we chose the perception test of the child's Self-concept (PAI), Villa Sánchez e Escribano (1999), which attempts to analyse the Self-concept of the child in preschool age and of children and teenagers that have Down Syndrome with a simple instrument, that can be easily understood, easily applied and easily corrected. The interest in the development of pedagogical methods for the practice of nature sports for juveniles that have Down Syndrome and the interest in analyse how these practices have influence in the Self-concept of this population were due to the lack of bibliography and research publications in this field. We believe that with this kind of test, it is possible to intervene in a more specific way in the development of the sports practices proposed. In this way, this work auxiliaries in augment the value of the Physical Education, and principally in the development of the population specific treated in here (juveniles with Down Syndrome).

2 LITERATURE REVISION

2.1: MENTAL DEFICIENCY: Describing the Down Syndrome

The more recent definition for mental deficiency, by the American Association on Mental Retardation (AAMR), that has being adopted since 1992, establishes that mental deficiency is described by an intellectual function that is severely below the mean of the population in general. In addition, there are associated limitations in two or more than two areas of applicable adaptative abilities: communication, basic health care, domestic competences, social abilities, and utilization of community's resources, autonomy, health and security, functional abilities for school, for work and for leisure. The mental deficiency appears before 18 years old (WINNICK, 2004).

The Down Syndrome was described for the first time in 1866 and is the most frequent combination of malformations that is observed in human species (SMITH, 1989). This syndrome is characterized for the presence of an additional chromosome, the number 21, which explains the other name of the disease, 21 Trisomy. In accordance with Duarte (2002), the Down Syndrome presents the following characteristics: decreased muscle tone with a tendency to keep the mouth open and the tongue out, slanting of the eyelids, small skin folds at the inner corner of the eyes, flattened face, exacerbate flexibility of the articulations, small stature and a peculiar pace, small nose with flattened base, small ears, short neck, big distance between the first and the second fingers of the feet, dry skin, flossy and thin hairtype, sexual development below normal levels, heart diseases in 40% of the cases, visual problems (myopia, astigmatism, among others) and auditive problems (loosing hear capacity), immunologic deficiency, intestinal malformations, respiratory problems, odontological problems and frequent thyroid dysfunctions. The main *causa mortis* in the first year of these children life are the congenital malformations of the heart. It is also important to protrude that: 10% to 15% of children with Down Syndrome present instability in the articulation between atlas and axis (these are the first and second cervical vertebrae) and 10% to 12% of them have instability between atlas and occipital (occipital is a bone in the back of the head). Because of this, it is important to do a radiologic exam of the cervical spine, inasmuch as this instability has different degrees and, in rare cases, it might bring more complications.

2.2 NATURE SPORTS

Nature Sports happen principally in the wild ambient, in accordance with Parlebás (1987). In this ambient, the practicer is subjected to variations and alterations in the environment. He has to perceive signals, adapt himself to conditions imposed by nature and be attentive to the possible natural obstacles. In accordance with Munster (2004), what someone is looking for in the practice of nature sports is the essence of the human being, the preservation of the individuality and respect for the differences among eachone, without imposing some specific stereotype behavior, like someone can observe in the radical sports, for example.

2.2.1 TREKKING: This sport consists in the pursuit for a path through some unfamiliar region (normally some forest, waterlogged terrestrial, bush), having some points for reference, located in an orientation map (VENDITTI JUNIOR, 2001).

2.2.2 ARBORISMO: Popularly known as *arborismo*, it is a sport that has just been introduced in Brazil recently. This new sportive modality consists in crossing some way near to the top of the trees, using various vertical technics, like rapel, for example.

2.3 SELF-CONCEPT

Self-concept is the manner as the individual evaluates himself or herself, and the result of this evaluation affects his/her affective, social and cognitive success (SANTANA 2003). Villa Sánchez and Escribano (1999) report that feelings, experiences and/or attitudes that the individual has about himself/herself is the Self-concept. In this way, the characteristics about this concept that he/she makes about himself/herself, in a positive or negative way, are parts of the Self-concept. They also divide the Self-concept in three components: cognitive, affective and behavioral:

- Cognitive component: this is what the person sees when he/she looks to himself/herself. This entirety may not be necessarily truth or objective.

- Affective component: It is formed by the affects, emotions and evaluations that accompany the description of someone's own, what is popularly named by auto-esteem.

- Behavioral component: It takes in consideration that the Self-concept conditions the form to behave in the everyday life, as the authors say "the person guides himself/herself in his/her conduct by the qualities, values and attitudes that he/she perceives for himself/herself".

Crano, Crano e Baggio (1983), relate that, besides there is some variation in the definitions of the Self-concept, the most part of the authors agree that:

"1- the Self-concept consists in a conjunct of attitudes inter-related that an individual has about himself/herself; 2-

these beliefs are product of a social interaction; 3-they are organized hierarchily and sistematically, in a manner that 4- the components more central in the structure are the more resistent to changes, but 5-given the nature of the system, changes in one aspect can leave to changes in other aspects. The maintenance and upgrading of the Self-concept constitute a motivating force for varios situations of social behavior”.

3 METHODOLOGY

For the evaluation of the Self-concept we have chose the perception test of the child`s Self-concept (PAI), by Villa Sánchez and Escribano (1999), which pursues to analyse the Self-concept of the child in preschool age and of children and teenagers that have Down Syndrome with a simple instrument, that can be easily understood, easily applied and easily corrected. The subjects of our research were 23 juveniles, ages between 16 and 32 years old, of both sexes, all of them having the Down Syndrome. They are students of the Down Syndrome Foundation (Campinas, SP, Brazil). In order to participate in the project, the juveniles presented parent`s or responsible`s authorizations. There were regularity and attendance by the students during the development of the research Project.

The program has happened in the School of Physical Education of Unicamp, after the approval of the Ethics Committee of the School of Medicine of Unicamp. There were classes of 1h 30min, once a week. We have developed Trekking and Arborismo modalities. The subjects of these classes were: Extension of the motor abilities to solve tasks, preparatory activities and development of motor improvement in nature ambients related themes. The technics activities provided had playful content, necessary to motivation, with detachment to the Ambient Education Notions, which are obligatory parts of the national curricular parameters.

The PAI tests were applied in 2 different moments: at the begginging and in the end of the program, with the objective to evaluate the possible influences of the program in the student`s Self-concept. Two other instruments of data collection were utilized in parallel: anamnesis, for obtaining behavioral and health data of the students, and a field diary, that had the purpose of registering the responses to the activities and behavioral reactions.

The test applied is simple and easily understood, and it can be applied in persons with difficult or absent ability for reading and interpretation of texts. The test is composed of 34 questions, each one representing an illustration that facilitates the interpretation and points the answer with exactitude.

In addition to the general aspects of the Self-concept, the PAI test evaluates 10 aspects of the child`s Self-concept:

- 1) Autonomy, independence feeling;
- 2) Certainty, confidence for the realization of tasks;
- 3) Sports, value for the competition;
- 4) Family, how is the feeling about family;
- 5) Class, the child in the educational world that he/she has just started to frequent;
- 6) Social, social relationship of the child;
- 7) Affective feeling, how does he/she feels frequently (sad, happy, etc);
- 8) Self-value, meaning of he/she competency;
- 9) Physical aspect, physical looking;
- 10) Appropriation feeling, related to friends, objects, etc.

4 CLASSES ANALYSIS

The program that was developed with the students with Down Syndrome, based on nature sports, made possible to deviate the focus away from the deficiencies presented by this population and their potentialities could be worked and improved.

The “competition element” looses detachment in the nature sports field and the social-motor-cooperative interactions gain importance.

In the elaboration of the classes we have considered pedagogical and playful components, in addition to physiological and pshycological factors related to eachone of the students and to the group as hole, like: depression, atlas-axis deviation, heart problems and problems related to the lack of opportunity for doing sports.

In order to improve the aerobics capacity, the coordenation, the balance, the laterality, and the rhythm of the students, we have developed velocity circuits that involved: obstacles with “swedish benches” with the objective of improving the balance of the students and permit them to become familiarized with height, that is present in the *arborismo*. The rhythmic uniformity of the group was pursued by stimulating “pega-pega” in the circuit, for example, and the laterality by using obstacles, such as arcs disposed in zig-zag on the floor and the students having to step in each one with just one foot alternately.

There was also some activity of cooperation in every class in order to stimulate the participation and collaboration among group members.

A the classes were been ministered, there have been some exploration of the natural ambients in order to aproximate the students to the practices of trekking and *arborismo*. In these activities they have practiced the exploration of natural ambients with activities on soil with declines and inclines, walkings on irregular soil and walkings on the top of benches and walls.

As long as the group was evaluating the obstacles were been changed to become more difficult and complex ones. It is important to detach that every activity was realized following all the security norms, and, because of this, there was not even one case of accident with the students.

Aiming at the practice of the *arborismo* we have presented the security materials for all the students and they have started activities in low heights, which were been augmented (pedagogical progression) always concurrently with the group`s evolution.

The exit to field at the end of classes was realized in the Serra do Japi, Jundiaí SP. It has included one trail with obstacles and a circuit with *arborismo*. All the students have realized the activities and have achieved success and the group`s rhythm has become satisfactory.

5 ANALYSIS OF THE PERCEPTION TESTS OF THE CHILD'S SELF-CONCEPT (PAI)

The format that was chosen for the application of the tests in the group of students that have Down Syndrome was the individual one. The test presents two instruments of measurement, one for the boys (where the main characters of the scenes are males), and other for the girls (where the main characters of the scenes are females). The test was applied by the same person and there was no external interference during the sessions of application of the tests.

The analyses were done based on the punctuation obtained in the tests. After the quantitative analysis of the results we present a discussion that relates the results and the literature revision about the Self-concept.

The test punctuation was made simple, in order to facilitate the analysis. Each question of the test had 4 possible alternatives as the answer. These alternatives were enumerated from 1 to 4, which, according to Villa Sánchez and Escribano (1999) mean gradually better Self-concept. In other words, 1 means the lowest Self-concept level and 4 the highest one. In this manner, given the answers of one student there was some punctuation for each of the questions (from 1 to 4) and the punctuation of all the questions were summated to obtain the final punctuation for that student. The maximum punctuation for

student was 136 points.

5.1 ANALYSIS OF THE TEST'S RESULTS

In order to do these analyses we added up all the tests applied in the beginning of the research and all the tests applied in the end of it. We had obtained 2690 points in the beginning and 2673 points in the end.

But, if we look more carefully for all the tests, we can encounter that, from the 23 students, 12 had an augment in their Self-concept test and 11 a reduction.

Among the 11 that had reduction, 5 had a reduction lower than or equal to 3 points, 4 had a difference between 3 and 10 points and just 2 had a difference greater or equal to 10 points.

On the other hand, in the group of 12 students that presented augment in the punctuation, only 3 had an augment lower or equal to 3 points, 6 had an augment between 3 and 10 points and 3 had an augment superior to 10 points.

From this, we can conclude that there was an improvement in the Self-concept of the group, although the simplistic first looking tends to show the opposite.

Given these results, we thought about separating the questions more relevant to the research, like those who were related to sports, social relations and auto-esteem, principally. Moreover, the Self-concept study says that this concept is developed by the influence of the persons that are significative in the individual's life, in other words, people from the familiar, scholar and social ambients. In this way, we could not try to do this separation to study just the influence of one of these entities, because the test doesn't permit this separation, as long as it is based on questions in the 3 areas just described.

During the program, we looked for developing in a continuous way the vision that the students had about themselves. However, the more closing relationship with the students through the classes permitted us to know a little bit more about their personal and familiar lives. By this, we can affirm that the significative figures in the familiar and social ambients are of great influence in the Self-concept of these individuals and, many times, in a negative way.

It could be noticed too that the image that the students have about themselves and the valuing of this image, the Self-concept, had influenced in their global development and, in a more specific manner, in the participation of these students in the activities during the classes.

6 FINAL CONSIDERATIONS

We can conclude through this project that juveniles with mental deficiency had showed motor delays related, in the great part of the cases, to cognitive factors of attention and comprehension and not related to motor deficits. Besides that, the difficulties discovered by these students are related to the fact that they don't find external conditions that activate their mental functioning.

There is a belief that the practice of nature sports can contribute in phases of improvement of the Self-concept, for it helps the student to discover and to keep his potentialities, through a conscious intervene act and through helping of well qualified professors during the process, stimulating and teaching the student to feed his own auto-esteem through the activities and putting the right in the right moment.

It is important to reinforce, however, that the professor should not treat the students in an ultra-protective manner or giving focus to his/her deficiency. On the other hand, the professor must stimulate and develop the student's potentialities. In this way, the much more opportunities and stimulus these juveniles with Down Syndrome can have, and the much sooner this can happen, bigger will be their chances to amplify their motor abilities and social rehabilitation. Because of this, it is necessary to re-think the physical activities pedagogies, looking for proportionate to this population chances of been in contact with different forms of sports practices, besides the contribution in the physiological, neuromotor, behavioral and social aspects, the last two ones, aspects deeply related to the Self-concept.

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EVALUATING THE SELF-CONCEPT OF JUVENILES HAVING DOWN SYNDROME THAT ARE PARTICIPATING IN A PROGRAM OF NATURE SPORTS

ABSTRACT: This work had the main objective of develop nature sports practices among 23 students having Down Syndrome (DS) and to test their Self-concept. The realization of this study had comprehended 3 different phases: bibliographic research, application of the PAI (the perception test of the child's Self-concept), and the elaboration and application of a program of nature sports (PEN). In the end of the program there have been the re-application of the PAI tests and it was made an analysis of the data results of the tests and of the impressions collected during the classes. It is possible to conclude that juveniles having DS show motor delays related to cognitive factors (of attention and comprehension), but they don't present motor deficits. It was identified that a PEN can contribute in the improvement of the Self-concept of this population.

Keywords: Self-concept; Down Syndrome; Nature sports

ÉVALUATION DE L' SELF-CONCEPT DE JEUNES INDIVIDUS PORTEURS DU SYNDROME DE DOWN AU SEIN D'UN PROGRAMME DE SPORTS DE PLEINE NATURE

RÉSUMÉ : L'objectif de cette étude a été de permettre la pratique de sports de pleine nature à 23 individus porteurs du Syndrome de Down (SD) et évaluer leur Self-concept. L'étude a été faite en trois étapes : recherche bibliographique préliminaire, application du (test the perception test of the child's Self-concept - PAI), élaboration et application d'un Programme de Sports de Pleine Nature (PEN). Un nouveau test a été fait à la fin du programme, avec l'application du PAI. L'analyse des données et des résultats des tests et activités réalisés nous a permis conclure que les jeunes individus porteurs du Syndrome de Down présentent des retards moteurs liés plutôt à des facteurs cognitifs d'attention et compréhension qu'à des déficiences motrices. Nous avons identifié qu'un PEN peut contribuer pour améliorer l' Self-concept de cette population.

Mots-clés: Self-concept; Syndrome de Down; Sports de Pleine Nature.

EVALUACIÓN DEL SELF-CONCEPTO DE JOVENES CON SÍNDROME DE DOWN INSERTADOS EN UN PROGRAMA DE DEPORTES EN LA NATURALEZA

RESUMEN: El objetivo de este estudio fue viabilizar las prácticas de deporte en la naturaleza a 23 alumnos con Síndrome de Down (SD) y evaluar el Self-concepto de los mismos. La realización de la investigación comprendió de 3 etapas: investigación bibliográfica; aplicación del Teste de Self-concepto Infantil (PAI), junto con la elaboración y aplicación de un Programa de Deportes en la Naturaleza (PDN). Al fin del programa aplicamos el re-teste con la aplicación del PAI y analizamos los datos colectados en los testes e en las clases realizadas. Concluimos que jóvenes con SD presentan retrasos motrices relacionados a factores cognitivos de atención y comprensión, pero no presentan déficit motriz. Fue identificado que un PDN puede contribuir en la mejoría del Self-concepto de esta población.

Palabras-Claves: Self-concepto; Síndrome de Down; Deportes en la Naturaleza.

AVALIAÇÃO DO AUTOCONCEITO DE JOVENS COM SÍNDROME DE DOWN INSERIDOS EM UM PROGRAMA DE ESPORTES NA NATUREZA

RESUMO: O objetivo deste estudo foi viabilizar as práticas de esporte na natureza a 23 alunos com Síndrome de Down (SD) e avaliar o Autoconceito destes. A realização do estudo compreendeu de 3 fases: pesquisa bibliográfica; aplicação do Teste de Autoconceito Infantil (PAI), seguido da elaboração e aplicação de um Programa de Esportes na Natureza (PEN). Ao fim do programa ocorreu o re-teste com a aplicação do PAI e análise dos dados coletados nos testes e nas aulas realizadas. Concluí-se que jovens com SD apresentam atrasos motores relacionados a fatores cognitivos de atenção e compreensão, mas não apresentam déficits motores. Foi identificado que um PEN pode contribuir na melhoria do autoconceito desta população.

Palavras-Chaves: Autoconceito; Síndrome de Down; Esportes na Natureza.