

A project of education for health and autonomy of persons with intellectual disabilities

Raquel Casado Muñoz¹ & Fernando Lezcano Barbero²

Abstract

Any educational policy addressed to people with intellectual disabilities should pursue a main goal: to obtain their greatest possible autonomy. In this article, we underlined two different points. The first and most important one is the 'functionality' of contents and activities, which will make possible the subsequent generalization or practical application of what is learned in different contexts. The second one refers to an appropriate methodology, in agreement with the characteristics of the disabled persons' groups. The Integral Program of the Education for Health, which is described in this paper, was designed under these premises. The program was tested in a pilot-study and has been (and still is) the subject of research in Spain as well as in other countries.

Keywords: Intellectual disability, Health education, Autonomy, Educational program

1. Introduction

For all people the goal of the developmental process is to reach the higher level of autonomy in relation to one's individual capacity and to the lifespan moment; and to the same – even greater – extent, this is especially the case with persons with intellectual disabilities. Educational support for developing individual abilities that aid social interaction or obtaining good results in differing environmental contexts (at home and outside, at school, in

* Received: 19 May 2009, Revised: 25 November 2009, Accepted: 25 November 2009.

© 2009 Associazione Oasi Maria SS. - IRCCS / Città Aperta Edizioni

¹ Universidad de Burgos, España. Facultad de Humanidades y Educación. Dpto. de Ciencias de la Educación - Villadiego - 09001 Burgos (España) - E-mail: rcasado@ubu.es

² Universidad de Burgos, España. E-mail: flezcano@ubu.es

the free time) must be a fundamental value for schools or other educational context where people with intellectual disabilities are involved.

The main aims of the *American Association on Health and Disability* (AAHD) are to advance health promotion and wellness initiatives for people with disabilities (Blankenbaker & Carlin, 2008), and education is fundamental for this promotion.

In this article we establish the bases for the creation of didactic material for young people with intellectual disabilities, and successively we will present an Integral Program of Health Education planned for this group. However, this program could be also adapted for other groups with social learning difficulties, people affected with psychic diseases, persons with difficulties in social adjustment, and immigrants from other countries.

2. Gaining greater functionality

To realize an adequate planning program with the objective of obtaining greater autonomy in people with intellectual disabilities, it is necessary to follow a criteria of 'functionality'.

In our case, we feel that health education could be the 'back bone' of all the learning contexts, given the enormous versatility of themes addressed to health problems, and the importance of the objectives and contents dealing with such education, as we shall see below.

To adequately justify this choice, we must adopt an approach associated with the concept of health defined by W.H.O., since 1946, as a state of complete physical, mental, and social well-being, and not simply as the lack of illnesses or infirmities. Health in this sense has a clearly integral meaning for the whole person.

The European Council (1992), referring to people with disabilities, expresses the concept that the aim of health education is to help people with disabilities develop the capacity to render rational the decisions made about one's personal health. This consists of maintaining a healthy style of life; learning individual and group models that contribute to maintaining good health; gaining autonomy in decisions pertaining health.

It's important to know what are the most important aspects of health education.

Casado Muñoz (2001) compared the diverse programs relative to good health, finding much in common between the themes taken into consideration (table 1).

Table 1 - Comparison among different programs of health education. Authors and fields of the projects

<i>Serrano González, (1990)</i>	<i>Junta de Castilla y León, 1993</i>	<i>Junta de Castilla y León, 1990</i>	<i>Willgoose (1975) adapted by Salleras (1995)</i>	<i>Nieda (1992)</i>	<i>Direction de Aps, Burgos, 1997</i>	<i>Junta de Andalucía, 1989</i>
<i>Community</i>	<i>School</i>	<i>School</i>	<i>Community</i>	<i>School</i>	<i>School</i>	<i>School</i>
1. - Environmental Health 2. - Drug abuse 3. - Sex education 4. - Food 5. - Mental Health	1. - Illnesses 2. - Oral health 3. - Mental Health 4. - Occupational health 5. - Tobacco. 6. - Physical exercise 7. - Drugs and Alcohol. 8. - Residence and cultural Center. 9. - Food and nutrition	1. - Cleanliness and personal hygiene 2. - Physical activity and free time 3. - Growth and physical development 4. - Food and nutrition 5. - Health prevention and control 6. - Security health 7. - Sexual Health 8. - Environmental Health 9. - Drug Prevention information	1. - Physical activity, sleep relaxation 2. - Food, nutrition, growth 3. - Dental health 4. - Prevention and control of illnesses 5. - Prevention and Security from accidents on-Job 6. - Mental health 7. - Alcohol, tobacco, drugs 8. - Education on family life and sexuality 9. - Environmental health 10. - Correct Public Health Policy	1. - Accident Prevention and First Aid 2. - Road Safety 3. - Personal Care, hygiene, Health 4. - Food Quality 5. - Drug addiction prevention 6. Prevention and Control of Illness 7. - Human Relations, Mental health, Emotionality and Sexuality 8. - Health Services and Emergency Services 9. - Environmental Health Education	1. - Health and Personal Hygiene 2. - Physical Activity and Rest 3. - Growth and development 4. - Food and nutrition 5. - Prevention and Control of Illness 6. - Security and Early Prevention 7. - Mental and Emotional health 8. - Sexual Health 9. - Health and Environment 10. - Drugs, Alcohol, Tobacco 11. - Accident Prevention 12. - Postural Hygiene	1. - Environmental health 2. - Game-Playing 3. - Physical activity 4 - Food 5. - Hygiene 6 - Sexuality 7. - Mental Health 8. - Accident Prevention 9. - Drugs

The table 2 outlines relationships between themes regarding health, and adaptive skills of people with intellectual disabilities; the aim is to compare the areas of competence as proposed by the American Association on Mental Retardation (2002).

Table 2 - *Relation between areas and contents of adaptive competencies and basic themes related to health: Source: Casado Muñoz (1999, 2001)*

Areas of Adaptive Competence	Contents of the areas and related competencies	Basic themes related to health
Communication	Comprehension and expression of messages	All themes, especially mental health
Personal Care	Food and nutrition, hygiene	Food and nutrition, hygiene illness prevention Sexual health
Home life	Food, hygiene, security, social interaction, etc.	Food and nutrition accident prevention Mental health
Social skills	Social behavior: friendship, interpersonal relations, social participation, etc.	Mental health Drugs Sexual Health
Community	Trips, shopping, medical assistance, social interaction, etc.	Mental health Food and nutrition Security Environmental health
Self-direction	Decision making, asking for help, problem solving, assertiveness	Mental health illness prevention
Health and security	Diet, prevention, treatment of illness, first aid, sexuality, physical fitness	Food and nutrition illness prevention Sexual health Security
Functional academic competencies	Cognitive competencies: reading, writing, basic functional concepts	All basic themes about health
Use of free time	Rest, choice and participation in activities, home and community entertainment, social interaction.	Mental Health Drugs
Work	Work ability, appropriate social behavior, interpersonal relations money management	Security Mental Health

3. Methodology

To deal with methodological aspects that give direction to and guide the process of elaborating guidelines for educational materials, we will follow some basic principles (De La Fuente Fernández, 1999):

- Individualization: Students' different work rhythms and rates of learning have to be respected. In the same way, the process of learning must be gradual and sequential. We must encourage approaches that improve a student's self-esteem.
- Globalization and integration: Content integration must be reinforced; placing in sequence learning processes to reach objectives more easily, avoiding fragmentation that inhibits a unified learning process.
- Functionality: Learning must be directly related to aspects of daily life.
- Comprehensiveness: All students must adhere to learning processes considered fundamental for intellectual development and improved socialization.
- Diversity: Respect for differences in interests, motivations and capacities of each student.
- Cooperative work: Both students and teachers must work together to achieve practically useful results of education.

4. Approaches to gender variable

Another question to which special attention must be focused concerns "gender treatment", in consideration of the greater vulnerability of women with intellectual disabilities. Both in text as in the images and activities, it is fundamental to treat with adequate attention gender differences, strengthening male-female equality and avoiding roles and attitudes that can negatively influence students.

Therefore we think it is useful to present images of young people working in non sexist roles, avoiding exclusively feminine traditional roles, and presenting situations that permit identifying the woman's role in a context that overcomes their past exclusion from various professional activities (Casado Muñoz, 2005).

On the other hand, also for men, images and activities have to be presented avoiding the stereotyped divisions of roles traditionally separating them from women: for instance, home-making, bringing up children, nursing old people, has not been considered a "male role". These proposals must complete a social integration that avoids the traditional prototypes, now in a phase of transformation.

Also the inclusion of images and activities that can highlight the inequalities existing in various occasions will offer students issues for debate and search for alternatives promoting equality between gender roles.

5. Evaluation: involving all educators

Evaluation is a fundamental process as part of any educational policy, and, though teachers play a fundamental role in this (Ruiz, 1999), we must include other sources of information, which can be:

- Participating students, who have evaluated the contents and activities, offering proposals for improvement.
- Parents who also play an important role, since they better know how to apply in a family context the learning already initiated in an appropriate institution.
- Professional advisors can assure - in the same way as parents - accurate means of observing the progress or lack of in a context outside home.

Unifying this input from all participants, and the subjects themselves, for this analysis will greatly aid in formulating programming of learning and gradually modifying the program itself, to adapt it to the needs of the participants (and not students needing to adapt to proposals).

6. Integral Program for Health Education - Work Proposal

We present a synthesis of the Integral Program for Health (Casado Muñoz & Lezcano Barbero, 2006) that meets the requirements set forth.

The educational material we propose aims to be inclusive, open, and flexible, subject to any modifications or variations that educators believe valid for adapting to individual characteristics or groups of persons with intellectual disabilities whether young people or adults, and in differing contexts.

In a particular way, the “environment” is particularly important when applied in a different country from where it was first validated, since different customs, health factors correlated with climate, food, etc. should be analyzed and taken into account before the application of the program.

The educational materials are conceived to be utilized in a classroom (limited time for assistance, specific space needed, etc.). At the same time we consider it of fundamental importance to include and create stages in particular areas of social interchange (city Centers, residence areas, home) that serve to connect classroom with life, to increase learning opportunities, and to apply in everyday life what one has learned from these experiences.

From all these reasons, we have tried to create some versatile educational materials with many different activities and supports such as schedules, music, videocassettes, etc. We follow O’Neill’s (1980) recommendations regarding the simultaneous utilization of many informative and educational strategies from different sources, and the same author’s conclusions about the success of health education programs because of their long duration, in which the educative messages have been oriented through diverse means, with active participation of students.

A basic premise is the fact that the contents - that is, the illustrations that accompany the text - must take into account students' age. It is also important to work with colored materials. For this reason, the program has more than 500 original color designs in the schedules suitable for student's work.

To summarize, we have tried to plan some didactic materials adapted to the needs and interests of young people with learning difficulties; materials that deal with practical realities of daily life with the greatest possible simplicity; educational resources where the scarce or null reading-writing abilities are not an obstacle in following the student's formative path, and where students (who think, feel, experiment, comment...) are principal and active participants in all aspects of the whole program.

6.1 Program Objectives

The following general aims are outlined:

- Contribute to develop students' personal autonomy.
- Learn basic concepts for a healthy life.
- Discover, develop, positively evaluate models of both individual and group healthy life.
- Get students able to decision making in relation to daily activities, and to improve environmental factors that concerns not only their own health but also that of other people.
- Learn to understand and develop resources to avoid risk situations.
- Teach students how to search for adequate help in different risk situations.

6.2 Structure

The program is composed of 8 didactic units: Food and Nutrition, Personal Hygiene, Injury Prevention, Drugs, Environmental health, Mental health, Prevention of Illness, Sexual Health, in the following format:

- A pamphlet including health questionnaire to determine student's initial level.
- A CD with didactic material including all units.

Each Didactic Unit consists of a "Teacher Manual" and work schedules.

The *Teacher Manual* is subdivided into the following parts:

- Introduction.
- Relation to other program issues, to introduce teacher to aspects in common between each Didactic Unit and the others.
- Educational objectives, planned for the Didactic Unit.
- Contents: summary of the elements contained in the Unit: concepts, comparisons, thinking, procedures, attitudes.
- Activities report: organizing a group of activities that the teacher can directly integrate or adapt according to student's characteristics. Their development can be mainly achieved through oral communication, since this form of communication permits students to analyze and

deepen understanding more easily. But also activities related with reading writing and computing are implemented.

6.3 *Types of Activities*

- analysis of information from work schedule
- case studies
- group debates
- role-playing
- couple diagnosis and presentation of results to the group
- personal daily activity growth
- elaboration of maps, illustrative cards, slides, etc.
- distribution of information for special places in the Center
- creation of didactic objects according to the proposal of the work schedules
- interviews with people who can offer relevant information on themes under attention
- making inquiries, questionnaires
- visiting points of reference
- making experiments
- didactic materials for teachers for widening range of contents in each unity
- materials for parents and tutors, presented in simple format, offering parents more opportunities for involvement in students growth through daily activities at home
- materials for evaluation to facilitate parents', tutors', students' and teachers' participation
- activity summary: helps teachers gain a global view of program, adding or subtracting activities and work-plans according to specific needs of group
- bibliography: an important reference for increasing information sources

6.4 *Work Schedules*

These documents contain open and flexible proposals in a simplified form similar to that of the Teacher Manual. They consist of material each student will receive at the beginning of each Unit. The schedules are suitable for individuals, though other have been planned for group work.

6.5 *Music*

Music is a relevant aid for strengthening motivation, an excellent technique for improving expression and positive dynamics (Serrano González, 1998). Our students have welcomed it.

If, as we have previously said, it is important to adapt materials taking into account different countries and cultures, in music this becomes funda-

mental for showing that simply transferring a musical piece from one country to another does not have the same educative result.

Once our program has been planned with the characteristics we have described, it is essential that it get applied and evaluated. In the following section we will indicate the procedure followed for validation of the program, and the results obtained.

7. Program validation: a pilot study

7.1 Working hypothesis

According to our hypothesis, the students who are participating in the Program will improve their knowledge and learning aptitudes, as well as their daily life behavior in greater measure than those who participated in a traditional formation program, in the same Center.

To attempt to confirm this hypothesis, we have programmed a quasi-experimental research project, so defined because the sample is necessarily not randomized, and experimental and control groups are not equivalent, based on planned selection and attribution to groups; participants to the formation program were selected according to variables such as age and suitability for the program itself.

The hypothesis is that differences exist in the treatment (experimental group) compared with activities normally planned in the Center for Occupation Formation (control group).

Table 3 shows the research project outline planned to test the hypothesis.

Table 3 - *Research Project Outline*

<i>Group</i>	<i>Composition</i>	<i>Measure before treatment</i>	<i>Treatment</i>	<i>Measure after treatment</i>
Experimental	Incidental	Yes	Experimental Program	Yes
Control	Incidental	Yes	Normal formative program at Center	Yes

7.2 Measures

As measurement instrument we used the *Health Questionnaire* developed and validated by Casado Muñoz in 1994, whose reliability was verified finding in particular an high Cronbach's alpha coefficient (0.92) (Casado Muñoz & Lezcano Barbero, 2006). The Questionnaire was previously vali-

dated by submitting to a sample of 124 subjects that comprised 86% of young people who attend the First *Social Guarantee Program* for students with special educative needs, conducted in Spain.

Methods and techniques of qualitative research has been also adopted, such as systematic observation by parents and teachers, along with group interviews of professional experts, parents and students.

7.3 Sample

The experimental pilot group, for the preliminary evaluation of the Program, was composed of 9 participants to a *Social Guarantee Program* as students with special educative needs.

The control group was composed of the same number of age-matched students of an Occupational Formation Course.

The age range was 16 - 20 in the experimental group (mean age 18.0), 20 - 24 in the control group (mean age 21.9).

The small number of participants in the sample was due to a policy of adopting in the Program group classes of between 8-10 students.

To avoid spurious influences and to enhance the reliability of the research process, the two groups were selected from the same center: in our case the "El Arca" Center that belongs to the "Asprodes" Center of Salamanca (Spain), that works with young people with intellectual disabilities over the age of 16.

7.4 Educational Intervention

The Program was carried out over 18 months, within the curriculum of the Basic Formation (10 hours a week during the first course; 6 hours a week in the second course), offering also an interdisciplinary program for selected aspects particularly appropriate for the Area of Specific Professional Formation (security and prevention of accidents in the work place); the Area of Tutoring (communication and interpersonal relations) or in the educational component for Complementary Activities (healthy pastimes, etc.)

The implementation of the program was accomplished by well-trained teachers from the Occupation Center, attempting to get experience in a natural educative context.

7.5 Results

To verify if the changes in each of the two groups were statistically significant or not, the pre-post differences have been analyzed by means of paired samples t-test. We considered the variations obtained through the application of the *Health Questionnaire* in each of the dependent variables (didactic unities) at the beginning and end of the experience for each of the two groups.

The analysis was performed using the statistical package SPSS.

Results have shown in the experimental group a significant pre-post dif-

ference ($p < .05$) in the following variables: Nutrition, Health Prevention, Sexual health, Mental health, Drugs, Environmental Health, and Global Score on the *Health Questionnaire*.

This same group did not show significant change in the variables: Personal Hygiene and Health Prevention. At the same time we observed, through other qualitative methods of assessment, that the evolution of the experimental group was very positive even in these two variables although the quantitative differences did not reach the critical limit for statistical significance, due to the small number of subjects in the group.

On the contrary in the control group there were no significant differences ($p > .05$) either in the single variables nor in the Global Score of the *Health Questionnaire*.

Besides this, through information obtained by means of the already quoted qualitative instruments, such as clinical observation and semi-structured group interviews for parents and professional experts, we tried to test the generalization of reinforced learning processes and behavior characteristics.

Both professionals involved in the development of the program and parents have confirmed the positive evolution of students from the experimental group, while in the control group the changes were less visible.

This improvement in subject's behavior has been mainly associated with: personal hygiene, conforming to rules, cleanliness, correct observance of road safety norms, improvement in social relations, request for greater independence, less consumption of alcoholic beverages.

8. Conclusions

We believe we have satisfactorily reached, through the pilot research project discussed above, the objectives set-forth for students participating in the program:

- Students greatly improved their conceptual and procedural understanding in all variables studied, with particular significance in 7 out of 9 areas investigated. The less significant results of the other two areas – i.e., hygiene and health prevention – are contrasting with the positive evaluations of parents and experts.
- Students improved daily behavior connected to hygiene, road safety, alcohol consumption.
- Students have shown greater interest and motivation in working with Program didactic materials, and have generalized their learning to other contexts and situation.

In addition, parents and experts have positively appreciated the Program, considering it innovative, adequately prepared and organized with materials capable of attracting the attention of students and enforcing their motivation. The students themselves have appreciated it.

The encouraging results obtained from this pilot-research have confirmed our hypothesis of its validity and given us the motivation to continue forward along the promotion of health education for people with intellectual disabilities, emphasizing the need to develop suitable didactic materials for these subjects and stimulate interest among experts who work in this area. In the same way, we hope that the program strategies, if correctly adapted, can help people with intellectual disabilities in other countries.

We are presently verifying if the acceptance of these didactic materials for young people and adults with intellectual disabilities can be generalized and opened-up to include applications in other sectors and contexts (Casado Muñoz, 2005; Casado Muñoz & Lezcano Barbero, 2006). At the present, considering that the research initiated and carried-out in Spain for Program evaluation confirms the excellent results for enhancing disabled student's learning capacity and responsibility, we are trying to adapt the Program to people affected with Autism, pursuing new opportunities for these persons in our country and others, for instance Argentina.

References

- American Association on Mental Retardation (2002). *Mental Retardation. Definition, classification and systems of supports (10th ed.)*. Washington, DC: American Association on Mental Retardation.
- Blankenbaker, R., & Carlin, R. S. (2008). Message from American Association on Health and Disability (AAHD). *Disability and Health Journal, 1* (1), 1-2.
- Casado Muñoz, R. (1999). The education for the Mental Health of the young with mental retardation. Paper presented at the *2nd European Congress of Mental Health in Mental Retardation*. Brunel University, Uxbridge. 8-10 september 1999.
- Casado Muñoz, R. (2001). *Educación para la salud de jóvenes con discapacidad intelectual*. Burgos: Servicio de Publicaciones de la Universidad de Burgos.
- Casado Muñoz, R. (2005). Mujer con discapacidad intelectual. In R. Casado & N. De Juan (Eds): *Inclusión y no discriminación de la mujer con discapacidad*. Burgos: Servicio de Publicaciones de la Universidad de Burgos.
- Casado Muñoz, R., & Lezcano Barbero, F. (2001): El Programa Integral de Educación para la Salud (PIEpS): innovación didáctica para jóvenes con discapacidad mental. In J.J. Bueno Aguilar, et al. (Eds). *Atención Educativa a la diversidad en el nuevo milenio*. Actas de las XVIII Jornadas Nacionales de Universidades y Educación Especial. La Coruña: Universidade da Coruña.
- Casado Muñoz, R., & Lezcano Barbero, F. (2006). *Programa Integral de Educación para la Salud de jóvenes con discapacidad Intelectual*. Madrid: Comunidad de Madrid. Dirección General de Promoción Educativa.

Council of Europe (1992). *Recommendation on rehabilitation policies for the disabled*, Strasbourg: Editions of Council of Europe.

Fuente Fernández, M. A., De la (1999). Los Programas de Garantía Social como respuesta a las Necesidades Educativas Especiales. In: *Educación e inserción socio-laboral de personas discapacitadas*. Santiago de Compostela: Universidad de Santiago de Compostela.

O'Neill, M. (1980). La modification des comportements reliés a la santé. I. Suggestions pour l'organisation des programmes de Santé Communautaire. *Union Medical Canadienne*, 109, 921-928.

Nieda, J. (1992). *Educación para la salud. Educación sexual: transversales*. Madrid: Ministerio de Educación y Ciencia, Marín Álvarez.

Ruiz, J. M. (1999). *Cómo hacer una evaluación de centros educativos*. Madrid: Narcea.

Salleras, L. (1995). *Educación Sanitaria*, Madrid: Díaz de Santos.

Serrano González, M. I. (1998). La educabilidad de la salud. ¿Tiene importancia la educación para la salud en nuestra sociedad? In M. I. Serrano (Ed.). *La Educación para la Salud del siglo XXI. Comunicación y Salud*. Madrid: Díaz de Santos.

Willgoose, C. E. (1975). *Health teaching in the secondary school*. Philadelphia: W.B. Saunders.

