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13. SCHOOL HEALTH EDUCATION NOWADAYS: CHALLENGES AND TRENDS

School health education has been viewed in a large variety of perspectives. In this chapter we present, in a historic approach, the biomedical model, the holistic view as well as the health promotion, autonomy and citizenship perspectives of health education. The aims of the health promoting school and the relevance of partnerships with the health sector, the pupils, their families and the community in health education are emphasised. Social representations, ethics and values in health education are referred. Special attention is given to models of school health education, the nature of knowledge in health education, prevention of health risks, effectiveness of health education practices and also to teachers' practices and their role and training in health education.

HISTORIC APPROACH TO HEALTH EDUCATION

The Origin of Health Education – the Hygienic Approach

Health has always been regarded as a major individual and social concern. By the end of the 18th century the public authorities of European countries initiated social health measures in a large social policy. Although not called yet "Public health", these measures associated the medical knowledge at that time with the social wellbeing, so that doctors, in addition to treating the ill, became interested in looking at the physical and social environment, housing and health working conditions.

Association of pathologies with work was earlier reported by Bernardini Ramazzini, already in 1701, when studying Italian artisans (Faure, 2002). At that time diseases could often be identified but there were no efficient means for treatment. It was at the end of the 18th century that the first vaccine appeared with the work of the English scientist, Edward Jenner in 1798 (Scott, 1996) on the smallpox or *Variolae vaccinae*. The anti-variole vaccination was a matter of great importance in Western European countries as it was the way to set up an efficient and modern health service (Darmon, 1986). In the second part of the 19th century Louis Pasteur, in France, provided evidence for the existence of microorganisms responsible for infectious diseases (in particular, rabies and diphtheria) and Robert Koch, in Germany, discovered the Koch bacillus responsible for tuberculosis (Faure, 2002). In this period medicine was guided towards prevention.

It was in this context of fighting against infectious diseases that the hygienist approach of health education emerged. This approach focused on individual behaviour, following the social elite's discourses regarding the deprived lay people (Faure, 2002: 22): *The people must be educated like a child by telling them what they must do and not do*. Instructions concentrated on individual behaviour (absence of hygiene, deficient/unhealthy feeding) whereas social factors (poverty and social context) were not taken into account.

Health education in schools appears by the end of the 19th century, by introducing in some countries (for example in France, Spain and Portugal) the "lessons of morale" and "lessons of the things" (Csergo, 2002), concerning three main themes: hygiene, tuberculosis and alcoholism. The health messages were presented in the form of injunctive/authoritative prescriptions, *i.e.* rules to be obeyed.

The Biomedical Model of Health

The biomedical model of health has grown with the development of the rationalism where science determines the knowledge and understanding of the world, in particular the perception about health and disease (Naidoo & Wills 1994). According to Foucault (referred by Revel, 2002) the rationalism period was characterised by a despotic use of science and technology, which gained more and more influence on the productive sector and on policy makers, leading to a type of State rationalism. It created forms of governance and processes of control as well as a kind of behaviour rationalism, determining social normative measures and deviations to them. In this way the notion of "normal" (*versus* "abnormal") was established and the moral value that "normal corresponds to good" (*versus* "abnormal corresponds to evil") was assigned.

In this model of health education, the body is assumed as working like a machine (Doyal & Doyal, 1984):
– All parts of the body are connected but they can be isolated and treated separately;
– Being healthy is to have all parts of the body in good working conditions;
– Being ill is to have parts of the body working deficiently;
– Illness is caused by internal processes (age degeneration or deficient self-regulation) or external processes (body invasion by pathogenic microorganisms);
– Medical treatment aims to restore the normal body work, or health.

The biomedical model is centred in the disease, focusing on the causes of diseases their treatment and their prevention. Health professionals – having the knowledge for disease identification, cause and respective treatment – play a dominant role, often using persuasive and paternalistic methods (Ewles & Simnett, 1999). In this model, it is the health professionals' responsibility to ensure patients comply with the medical prescriptions and preventive procedures are encouraged as they can contribute to reducing disease.

Within this biomedical model, health education is seen as a preventive procedure aiming at persons' behaviour change to healthier lifestyles in order to avoid becoming sick. There are two main trends in the biomedical model of health education: the informative and the preventive approaches:

– Having the curative perspective, health education is reduced to instruction consisting of information focused on scientific knowledge. Messages in informative/inciting style are used.
– Having the preventive perspective, health education aims at a specific risk, by using fear in order to impose the rules (of living, of hygiene, of behaviour) to be followed. Messages in injunctive/authoritative style are often used.

Based in this biomedical model, school health education aims at teaching children and young people how to keep their body in good working condition and how to avoid diseases. Health messages are informative, injunctive/authoritative and explicative (Sandrin-Berthon, 2000). The implicit idea is that informing about an unhealthy behaviour and understanding it, is enough for the behaviour change or for avoiding unhealthy behaviours.

From the Biomedical Model to the Holistic View of Health Education

In an opposite perspective to the dominant biomedical model, Antonovsky (1987) was interested not really in the causes of disease but, on the contrary, on what keeps people healthy, in a so called "salutogenic" (health seeking) approach. In this framework, attention is focused (Katz & Peberdy, 1998: 31):

> on why some people remained healthy and emphasised that stressors and disruption were unavoidable aspects of life rather than the demons they are portrayed to be in the pathogenic account.

In this salutogenic paradigm, the dynamic relationship between the persons and their environment is essential and emphasis is given to the personal resources to cope with the challenges they face. To acquire competences to deal with stressors, one needs to create "a sense of coherence" by integrating the three components *(1)* comprehensibility, *(2)* manageability and *(3)* meaningfulness, Antonovsky (1987: 19):

> *(1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable;*
> *(2) the resources are available to one to meet the demands passed by the stimuli; and*
> *(3) these demands are challenges worthy of investment and engagement".*

Managing the relationship with the environment depends not only on personal resources but also on human relationships, social support and supportive environments (Carvalho, 2006).

The salutogenic paradigm makes an interesting bridge between the biomedical model and the social model of health, which assumes a holistic perspective of health and gives emphasis to persons and environment interaction and adopts the

logic of multi-causal theories of health and assumes health as being influenced not only by biological factors but also by political, economic, social, psychological, cultural and environmental factors (Naidoo & Wills, 1994; Katz & Peberdy, 1998; Ewles & Simnett, 1999; Carvalho, 2006; Berger *et al.*, 2011; Carvalho *et al.,* 2011; Caussidier *et al.*, 2011).

The social model of health does not dispense with medicine; it rather assumes that the medical model is just a part of the answer. To improve persons' health, it recognises the need for refocus upstream on the causes of ill-health in persons and communities, such as socio-economic, housing, nutrition, social and individual hygiene factors (Katz & Peberdy, 1998).

Within the holistic view of health, the aim of health education is to develop positive attitudes and behaviours towards health and wellbeing. The purpose may also be a behaviour change towards a healthier lifestyle to improve health but not focused in the prevention of diseases, as it is in the biomedical model of health education. The educational approach not only aims at giving information, ensuring knowledge and understanding of health issues, and enabling well-informed decisions to be made but also helps people to explore their values and attitudes (Carvalho *et al.,* 2008). More than acquiring scientific information, school health education should put the emphasis on helping children and young people to develop competences of healthy living (Ewles & Simnett, 1999; Carvalho 2002; Carvalho & Carvalho, 2006).

Taking the example of smoking, in this holistic perspective of health education the aim is to help people understand the effects of smoking on health, thus helping them to make a decision to smoking or not. Emphasis is on the activity to give them information about the whole effects of smoking, helping people to explore their own values and attitudes and come to a decision. If they want to stop smoking then they should learn how to do it.

School health education, in this holistic view, has a much broader view than the traditional biomedical health education that focuses only on formal classroom activities. The holistic school health education addresses also the development of healthy lifestyles, including the required changes in the school to make the social and physical environment more health enhancing. This is a matter of further discussion below.

Health Promotion, Autonomy and Citizenship

The traditional view of health as the *"absence of disease"* derives from a medical concept of disease as a pathologic condition – or deviation from measurable variables which represent *"normal"* parameters in the *"healthy"* body – that can be diagnosed and categorised (Katz & Peberdy, 1998). By contrast, the early definition by the World Health Organization (WHO, 1948) assumes health as a *state of complete physical, mental and social well-being*, in a wider perspective of welfare.

Within this view of health, the health education aim is no more to simply transmit knowledge about the human body but it also touches other fields like

physical education, arts education and activities promoting interpersonal relationship skills (Carvalho, 2002; Carvalho 2006; Carvalho & Carvalho, 2006).

In early 1970s most western countries experienced a crisis in the health sector due to the escalation of treatment costs, so that the therapeutic era was being challenged and a New Public Health Movement emerged (Ashton & Seymour 1988). This international movement called for social change and political action by presenting a view *which brings together environmental change and personal preventive measures with appropriate therapeutic interventions* (Ashton & Seymour, 1988: 21).

One decade later the *First International Conference on Health Promotion* held in Ottawa (Canada) in 1986, made progress on the earlier Declaration of Alma-Ata (former USSR, in 1978) and produced the well known Ottawa Charter, which projects the view that health is a personal struggle and a goal to be worked towards by a community, by assuming health as (WHO, 1986: 1):

> *a resource for everyday life, not the objective of living: it is a positive concept emphasizing social and personal resources as well as physical capabilities.*

The concept of health promotion was then stated as being:

> *the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social wellbeing, an individual or group must be able to identify and to realise aspirations, to satisfy needs, and to change or cope with the environment.*

The model of *autonomy and citizenship* referred by Eymard (2005) focuses on the self-consciousness within a psycho-social approach, where self-esteem and self-confidence are important features to help the person to feel self-assured in conducting his/her own life, being the guide of his/her own project of healthy life and quality of life. This person's ability to act upon his/her environment leads to the notion of empowerment (Naidoo & Wills, 1994; Tones & Tilford, 1994; Katz & Peberdy, 1998; Ewles & Simnett, 1999).

The New Public Health Movement together with the WHO's progressive view of health promotion have been changing the emphasis of health promotion practice from the traditional *"problem-based approach"* to a *"setting-based approach"* (Ashton & Seymour, 1988; Barić, 1994). In fact, conventional health education and health promotion practice endeavours to reduce or solve problems that are identified by etiological and epidemiological studies (*e.g.* distribution of lung cancer in smokers).

Thus health educators and health promoters, following the members of the medical and paramedical professions, have been engaged in providing health care and preventing diseases within the "medical model" framework (Barić, 1994). In contrast, in the "setting-based approach" health promoters are seen as partners of the management team in the setting, which is the main decision-maker. In this way, the new concept of "health promoting institution" is seen as the setting in which people live, work or play. In short Barić (1994: 203) declares:

"[it] means that we look at a population within a particular setting and find out what kind of health problems they are exposed to and what kind of health needs they experience and deal with them by means of health promotion and health education".

The concept of a Health Promoting School is based on the WHO view of health education and health promotion within a setting-based approach. Therefore, it has a much broader view than the traditional school health education that focuses only on formal classroom activities.

SCHOOL HEALTH PROMOTION

Children and young people spend a large part of their lives in school during their formative years. In this environment they eat, drink, smoke, fall in love, speak about AIDS and about drugs, face stress, experience emotions, etc. To tackle these issues and to prevent physical and mental health problems, actions of health education must be undertaken in the school setting. The school influences the daily life of children and young people, by means of the learning conditions which contribute for their personal and social identity (Mérini *et al.*, 2000).

Health education is one of the main school missions but it must take into account its specificity. The school is, first of all, a place of cognitive and social learning, not really a place for healing. Therefore it should not be focused on health risks and diseases but rather on developing skills and experiences, which enable children and young people to build competencies in taking action to improve their own health and well-being and that of others in their community, which also enhances their learning outcomes (IUHPE, 2008a).

An earlier well-known definition of health education by Tones e Tilford (1994: 11) refers to the learning gains not only in knowledge and ways of thinking but also in values clarification and attitudes and behaviour change, as follows:

"Health education is any intentional activity which is designed to achieve health or illness related learning, i.e. some relatively permanent change in an individuals' capability or disposition. Effective health education may, thus, produce changes in knowledge and understanding or ways of thinking; it may influence or clarify values; it may bring about some shift in belief or attitude; it may even effect changes in behaviour or lifestyle".

Changing to healthier behaviours is a rather complex process which depends, among other factors, on one's personal attitude towards general health, health risks and health topics (nutrition, sexuality, etc.). Attitudes are, in this context, judgments more or less favourable to health issues. These judgements depend on one's knowledge (health subject matters), beliefs and social representations, as well as the generated emotional reactions and intended reactions (Laure *et al.*, 2000).

The International Union for Health Promotion and Education (IUHPE) has clarified the concepts of "health education" and "health promotion" in school. The former, health education, is (IUHPE, 2008b:3):

a communication activity and involves learning and teaching pertaining to knowledge, beliefs, attitudes, values, skills and competencies.

the latter, health promotion, is (IUHPE, 2008b:3):

any activity undertaken to protect or improve the health of all school users.

Although both concepts of health education and of health promotion emphasise the participative approach to learning, the latter is a broader concept that goes beyond the classroom activities or curriculum implementation.

Aims of the Health Promoting School

The concept of a Health Promoting School is based on the WHO view of health education and health promotion within a setting-based approach. Therefore it has a much broader view than the traditional school health education that focuses only on formal classroom activities. Although there are many models of a health promoting school, they are all based on the five strategies of the Ottawa Charter (WHO, 1986) albeit adapted to the school setting (WHO, 1991 – referred by Colquhoun, 1997):

– *Health Promoting Policy* – by developing coherent curricula in education for health which brings biological ecological and social dimensions to a process of environmental health;
– *Creating Supportive Environments* – by utilising the setting of the school to encourage reciprocal support between teachers, pupils and parents;
– *Strengthening Community Action* – by drawing on existing human and material resources in the community in which the school is set and involving that community in practical aspects of the decisions, plan actions pertaining to the project;
– *Developing Personal Skills* – by providing information, education for health and opportunities to enhance life skills in the setting of the school community;
– *Reorienting Health Services* – by involving the school health service in project activities aimed at the promotion of health by utilising the skills of school health professionals on a broader basis than the traditional roles.

The European Network of Health Promoting Schools (ENHPS) was launched in 1991 as a joint and collaborative effort between the WHO Regional Office for Europe, the Commission of European Communities (CEC) and the Council of Europe (CE). According to the WHO Regional Office for Europe (WHO, 1995, quoted by Parsons *et al.,* 1996):

The health promoting school aims at achieving healthy lifestyles for the total school population by developing supportive environments conductive to the promotion of health. It offers opportunities for, and requires commitments to, the provision of a safe and health-enhancing environment.

The aim of the ENHPS (1997a:1) initiative is:

To influence and have impact of policy and decision making in the development, implementation and sustainability of health promoting schools in European countries. This aim is achieved through capacity building, resource development, research and evaluation, advocacy and dissemination.

Despite the diversity in culture and educational settings throughout Europe, there is a general agreement on the aims of health promoting schools which can be synthesised in 10 items (Barnekow et al., 2002:13):

– To establish a broad view of health;
– To give students tools to enable them to make healthy choices;
– To provide a healthier environment engaging students, teachers and parents, using interactive learning methods, building better communication and seeking partners and allies in the community;
– To be understood clearly by all members of the school community (students, their parents, teachers and all other people working in the environment), the "real value of health" (physical, psychosocial and environmental) in the present and in the future and how to promote it for the well-being of all;
– To be an effective (perhaps the most effective) long-term workshop for practising and learning humanity and democracy;
– To increase students' action competence within health, meaning to empower them to take action – individually and collectively – for a healthier life and healthier living conditions locally as well as globally;
– To make healthier choices easier choices for all members of the school community;
– To promote the health and well-being of students and school staff;
– To enable people to deal with themselves and the external environment in a positive way and to facilitate healthy behaviour through policies; and
– To increase the quality of life.

The Schools for Health in Europe (SHE) network is the continuation of ENHPS, having started in January 2007. Currently, SHE network is present in 43 European countries aiming at supporting organisations and professionals in Europe who work in the field of school health promotion, intending to share good practice, expertise and skills (SHE, 2008).

The health promoting schools involved in SHE network are intended to value and develop (SHE, 2008):

– *Equity* – equal access for all to the full range of educational opportunities;
– *Participation* – a sense of ownership is encourage by pupils' participation;
– *Empowerment* – foster pupils in developing their own ideas about healthy lifestyles and making active and healthy choices;
– *A healthy environment – including the physical environment, the quality of the relationships among pupils, among staff, with parents and the community;*
– *Effective policies – developed locally and reflecting local interests, problems and priorities.*

There is growing evidence that the health promoting school approach has a positive impact on the primary teaching and learning processes of the school, including higher academic achievement, reducing early school leaving, as well as higher job satisfaction (Mérini *et al.*, 2000; Barnekow *et al.*, 2002; Leger *et al.*, 2007; SHE, 2008).

Partnership in School Health Promotion

Depending on individual countries, health is not taken into account in educational policies in the same way because of general political organisation, priorities, organisation and goals of education systems (Pommier & Jourdan, 2007). In some countries, health education is a national matter with national guidelines, standards and curricula. In other countries, the regional or local authorities have the responsibility of developing health education policies.

Although there are country differences regarding the organisation of both health and education sectors resources, the fact is that both are inextricably linked. This also means that improving effectiveness in one sector can potentially benefit the other. This makes the school an important and rather complex setting to implement health promotion and health education. Figure 1 is an adaptation of the eco-holistic model of the health promoting school adapted from Parsons *et al.* (1996). This model locates the health promoting school in the context of international influences (1 – see Figure 1) as well as national (2), regional (3) and local (4) health and education legislation and initiatives, which interact with each other. In an inner circle there is the management, planning and allocation of roles (5) and links with outside agencies, the family and community (6). They both are in close association with the core of this organisational model composed of the formal curriculum (7), the model of the health promotion adopted by the school (8) and the social and physical environment – contextual curriculum (9). All these items are put in place in order to address pupils' feelings, attitudes, values, competencies and health promoting behaviour (10), which is the main goal of the school health promotion.

As shown in this model, putting into practice a health promoting project in a school contributes, at this level, to the implementation of Public Health policies and Educational policies, in a close articulation between them (see 1 to 4, in Figure 1). A critical issue for effectively promoting health in schools is that all stakeholders have a sense of ownership and involvement in the process. The main partners are the following:

– The education sector, with special reference to teachers;
– The health sector, in particular the school health promoters;
– Children and young people;
– Families and communities;
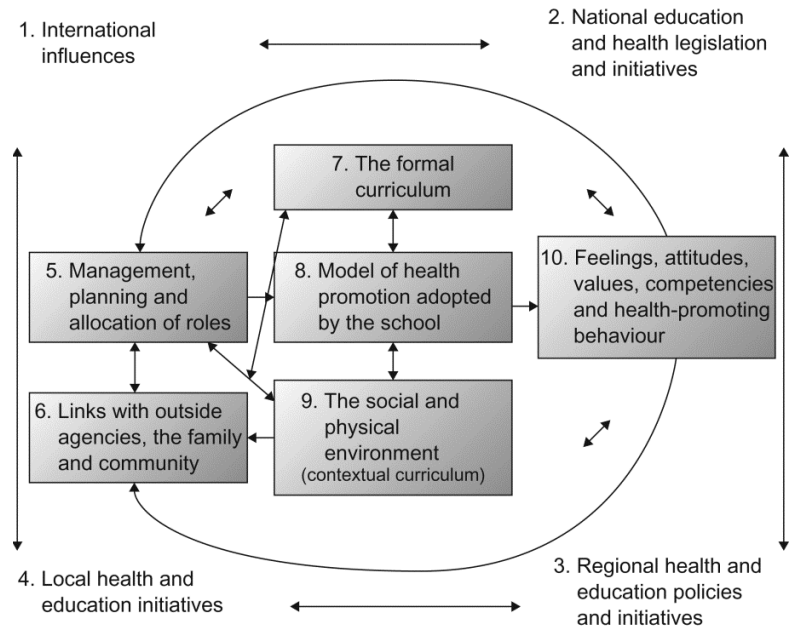– Health promotion researchers.

Figure 1. An eco-holistic model of the health promoting school.
(Adapted from Parsons et al., 1996).

Therefore the setting up of the management, planning and allocation of roles (5) as well as the links with outside agencies, the family and community (6) are crucial for implementing effectively health promoting schools.

Education sector and health sector partnership. In all countries the school curriculum has always been influenced by the policy makers to introduce priority topics in relation to the education of children and young people and the needs for society. This "external didactic transposition" (Clément, 2006) is therefore a vehicle to respond to national needs and to tackle "crisis" such as the AIDS epidemic or the escalation of substance abuse.

Nowadays, in most European countries, the education in schools is regarded in a broad perspective, and the curriculum (7, in Figure 1) is taken in a holistic view, defining it in terms of the totality of learning experiences that the school offers to its students, i.e. the formal and the informal curriculum. In this context, the effective school is perceived as a learning community that sees learning as a shared responsibility, enabling pupils to be disposed to have a commitment to learning, respect and care for self and for others, and a sense of social responsibility (Barnekow *et al.*, 2002). This current wide vision of the school ethos and social climate has been assumed by the education sector as increasing the learning outcomes in the classroom.

This holistic view of the curriculum by the education sector fits well with the health promotion approach set down by the health sector. However tensions can arise in the limited time made available for the various formal curriculum areas and health issues may be pushed to a peripheral position. It is encouraging to find that the current broader view of the informal curriculum supports the health promotion approach as point out by the health sector (Barnekow *et al.*, 2002).

The health services are the local or regional school-linked or school-based health services which have a responsibility for child and young people health care and promotion, through the provision of direct services to students or schools or in partnership with schools (IUHPE, 2008a). In addition to screening and assessment by licensed and qualified practitioners, the health services in some countries include the provision and monitoring of healthy food for students and staff, as well as mental health services to promote students' social and emotional development and improve social interactions for all students.

Different language from specialists of education and the health sectors may be a cause of sensitive situations when working in partnership (Kemm, 2006). Taking the example of the curriculum: for the education sector the term curriculum can mean the totality of the learning experiences the school offers to children and young people (the formal and informal curriculum as referred before); for the health sector the term curriculum is usually taken as the syllabus guidelines or the classroom teaching and learning activities, and the wider influence of the school is encompassed within the whole-school effect or health promoting school.

Moreover, naturally the education sector gives priority to education, as schools are in the education sector, whereas the health sector gives priority to health which is their working purpose. These are different starting points, generating different priorities and possibly different perspective for the model of the health promotion to be adopted by the school (8, in Figure 1). The partnership between both education and health sectors requires their respective professionals be aware of these difficulties and work in an open and positive attitude towards their slightly different aims. More recently this tension between both sectors has been diminishing with the evidence that health promotion initiatives cause positive impact on the learning outcomes (Mérini et al., 2000; Barnekow et al., 2002; Leger et al., 2007; SHE, 2008).

Children / Young people partnership. The health promoting school concept puts great emphasis on empowering pupils and building their capacities in health behaviours, policies and knowledge (Leger et al., 2007). Therefore children and young people can have an important role in healthy school initiatives – such as in the canteen and other food services, in physical environmental actions, in policies concerning bullying – addressed collectively in order to have a general health impact. Taking into account the children's and young people's biological, cognitive, cultural and social developmental stages, the great challenge is to build "action competencies" as proposed by Jensen & Simovska (2005) for the following four reasons:

– Being active in health promotion activities, contributes to develop children's and young people' reflection about the process and improve their sense of ownership of learning. In this way it is more likely the activities lead to changes in children's and young people's practice, behaviour or action;
– Participatory educational approaches promote democracy-upbringing, i.e. children's and young people's participation and awareness about joint responsibility, rights and duties in society contribute to intellectual freedom, equality and democracy;
– There is the ethical obligation to involve participants (children and young people) in decisions on health issues directly related to their own lives;
– There is the need for individuals (children and young people) to clarify the understanding about terminology, aims and general framework of improving health, which often is not coincident between health and education professionals. The former often emphasize the efficiency justification whereas the latter ones focus on the democracy-upbringing justification. These reasons are not necessarily in conflict but they are imbedded in different rationales, priorities and values.

According to the guidelines of the International Union for Health Promotion and Education (IUHPE, 2008a:1), individual health skills and competencies:

> *refers to both the formal and informal curriculum and associated activities where students gain age-related knowledge, understandings, skills and experiences, which enable them to build competencies in taking action to improve the health and well-being of themselves and others in their community, and which enhances their learning outcomes.*

Well-being in the school context addresses both cognitive and affective outcomes in school, being the affective one referring to attitudes the students have towards the school and learning. Children's and young people's evaluation of the school well-being has been carried out by Konu and Lintonen (2006) by looking at the four categories that define the school well-being model (Konu & Rimpelä, 2002): 'school conditions', 'social relationships in school', 'means for self-fulfilment in school' and 'health status'.

Parents, families and community partnership. School partnership with the pupils' families as well as with key local groups of individuals are important links for appropriate consultation and participation with these stakeholders, providing children and young people with a context and support for their actions (IUHPE, 2008a).

When parents are actively involved in promoting the health of their children, positive outcomes are more likely (Barnekow *et al.*, 2006). Studies have shown, for example, that parents actively involved in healthy-eating initiatives in schools produce more impact on the behaviour of young people in relation to food preparation (Perry *et al.*, 1988; Young, 2004).

The concept of health promoting school embraces the idea of the school and its wider community and environment. There is evidence suggesting that multiple health

initiatives involving the community, local groups, relevant agencies, professionals have stronger effects in pupils' health behaviour change than a classroom-only approach (Leger, 2007). The school surrounding environment must reflect the values being developed in the school, so that several examples of supportive community initiatives have been introduced (Barnekow *et al.*, 2006: 22):

– Facilitating safe and active routes to schools;
– Restricting the sale and advertising of unhealthy products near the school entrance;
– Providing drop-in social centres for young people where they can raise issues confidentially; and
– Providing attractive play and sports facilities in the school catchment area.

SOCIAL REPRESENTATIONS AND VALUES IN HEALTH EDUCATION

Social Representations

Social representations are a kind of current knowledge, also called common sense, which is characterised by the following three features (Jodelet, 1991):

– They are created and shared socially – they are constructed from the persons' experience as well as the acquired knowledge, thinking models transmitted by tradition, education and the media;
– They target practices of organisation – intending to control the environment as well as behaviours and communications;
– They participate in the construction of a common reality – a specific social community or a specific culture.

Social representations allow people to understand their environment, to facilitate their integration and to guide people's behaviours. The social representations are often embedded in social practices and are a kind of practical knowledge (Fischer, 1987) which is constructed throughout the daily experience, with the interaction with the object and, within this process, it is constructed and defined. Therefore they are interpretations of the reality and of the complex phenomena which have a sense in the social interaction. The social representations, which are in the interface of the psychology and the sociology, are constructed individually but they are rooted in the overall community which support them. Such representations are called social (Flament *et al.*, 1998) because they are created from the social codes and the values recognised by the society. Thus, they reflect the society and persons are determined by the social dominant representations where they grow up.

The social representations have a *cognitive purpose* as they facilitate people to integrate new data in their thinking frameworks. They are, therefore, a way of thinking and of interpreting the world and the daily life. The context and the values where the representations are constructed have influence on the mental construction of the reality. For the construction of the social representations there is always a part of individual creation and a part of the collective creation. This is

why the social representations are not fixed in the time; they tend to evolve albeit gradually.

Another purpose of the social representations is *guiding people's behaviours*, as they carry the notion of sense and create rules of conducting in society to aid people to communicate, to guide themselves within the environment and to act (Abric, 1997). Therefore they guide the attitudes, the opinions and the behaviours. The social representations have also a prescriptive function by defining what is licit, tolerable or inacceptable in a given context.

The social representations have also an *identity purpose*, by allowing the elaboration of one's gratifying personal and social identification, which is attuned with the systems of values and of rules socially determined (Mugny *et al.*, 1985, referred by Abric, 1997).

They also serve to *justify the practices* as being linked to the above purposes. The social representations concern mainly the relations between different groups and the representations of each group towards the other ones, justifying *a posteriori* their attitudes and behaviour (Abric, 1997).

In the field of health education, the social representations are important determinants in the sense that they influence the choices of health education and their approaches in possible confront of the scientific knowledge with the long-established personal and social practices that are determined by the social representations which can be in contrary to the scientific knowledge.

Individual and Social Competences

Improving personal and psychosocial competencies results in developing resources *"enabling people to increase control over, and to improve, their health"* (WHO, 1986: 1) and facilitates the adoption of healthy attitudes and behaviours. Broussouloux & Houzelle-Marchal, (2006) have split personal competences in two groups:

- Self-esteem, one's self-confidence, one's feeling of his/her personal efficacy, one's feeling that the others have confidence on him/herself, psychological security;
- Body regard, understanding the body sensations (pain, pleasure, etc.), understanding physical expression of feelings (anger, fear, etc.), understanding physiological needs (feeding, sleep, etc.).
- The same authors have separated the psychosocial competences in three groups:
- Towards the others, respect for the others, accepting the differences of living rules in society, etc.
- Conflict management, to privilege the dialogue in the case of disagreement, etc.
- Confidence in one's judgement, resistance to pairs' negative influence and the media.

Psychosocial competences have an important role in health promotion not only assumed in its large sense of *"physical mental and social wellbeing"* (WHO, 1986: 1) but also when health problems are associated to behaviours and when the

behaviour is linked to an incapacity to answer efficiently to the stress and to important elements of the daily life. The ten psychosocial competencies can be grouped in pairs as follows:
– to be able to solve problems; to be able to make decisions;
– to have creative thinking; to have critical thinking;
– to be able to communicate efficiently; to be clever in interpersonal relationships;
– to have consciousness of oneself; to have empathy towards the others;
– To be able to manage his/her own stress; to be able to manage his/her emotions.

The concept of empowerment – which is not specific of health education – is often used in the sense of a process by which people, organizations and communities gain mastery over their affairs (Restrepo, 2000). Adjusting this concept of empowerment to children and young people, Tones & Tilford (1994) and Green *et al.* (1996) have assumed that empowerment aims at giving pupils' the tools enabling them to make their own informed choices and allowing them to practise them in order to realise their aspirations. Therefore health education is seen as an education towards autonomy and decision making in order to facilitate children and young people to become actors of their own life.

Ethics in Health Education

Working on improving personal and psycho-social competencies, on educating for decision-making, on developing personal empowerment requires the previous reflection about associated ethical issues (Tones, 1986). First of all, because health education implies the interaction with one's personal sphere (the person intimacy, his/her family) and the public one (the school, the public health). It is not to contrast a scientific truth with the family practices neither it is to interfere in the private life by reproaching any behaviour; it is rather to create favourable conditions for the emergence of attitudes leading to healthier behaviours.

It is generally accepted that families are responsible for their children and young people's health education, however in the case of deprived families it is usually assumed that school should take responsibility for these children and young people's health education (San Marco *et al.*, 2000). In other words, school health education does not replace the families' intervention, but it helps them, reassures them, guides them and complements them in their health actions (Tubiana, 2004).

The borders between informing and persuading, between convincing and constraining, are rather delicate. Educators must determine their acceptable limits for carrying out actions to convince children and young people to adopt healthier behaviours, *i.e.* they must understand what the criteria are beyond which one might declare: *"it is bad to wish the good"* (Massé, 2003: 2). This is a fundamental ethical issue which establishes the acceptable limits for the implementation of healthy practices, having in mind the tensions between promoting the superior interest of the people' health and the person's right for his/her autonomy to decide what is pertinent for him/her.

Four ethical principles, currently well accepted, have been originally expressed by Beauchamps & Childress (1995):

– Respect for autonomy, respect for the rights of people and their right to determine their own lives.
– Non-maleficence, not doing harm.
– Beneficence, doing good.
– Justice, being fair and equitable; how to respect everyone and the way the harm and good are distributed.

Often, Public Health appears like a *"new profane morality"* replacing the religion and the law of the modern world, working like a culture with a *set of rules, of values and of knowledge concerning the body management* (Fassin, 1996: 270). Health education – and more widely Health Promotion which is founded on Public Health and epidemiology – keeps trying to define the normative criteria that are associated to behavioural risk factors and unhealthy lifestyles. Persons being away from these rules get exposed to evitable risks and they are submitting themselves consciously to health risks, resulting in the so-called *"victim-blaming"* (Naidoo & Wills, 1994; Katz & Peberdy, 1998; Ewles & Simnett, 1999). Blaming people for their own ill-health is an ethical issue that educators need to face, since often people are the victims of their circumstances (Ewles & Simnett, 1999). The rules, the normative criteria, are social constructions shared within a community carrying subjacent values, often implicit ones, which one must question about in order to place them as ethical issues to be work with.

Values in Health Education

Values are a main issue in the health education global approach. There is no single agreed definition for the term *"value"* (Rennie, 2007), but in a large sense values can be expressed as *"principles taken by the society or the persons to make their choices"* (Raynal & Rieunier, 1997: 375). They are linked to beliefs and attitudes which guide person's behaviour as it has been adequately stated by Halstead (1996: 5):

> *principles, fundamental convictions, ideals, standards, or life stances which act as general guides or as points of reference in decision-making or the evaluation of beliefs or actions and which are closely connected to personal integrity and personal identity.*

Education carries inexorably the notion of values to be transmitted, often expressed in an implicit way (Reiss, 2007). When associated to health education, values have been stated as (Massé, 2003: 47):

> *the prescriptive or proscriptive beliefs helping to determine the acceptability or the desirable features of the aims and of the means of social interventions.*

There is no education without the idea of selecting some issues that are preferable to other ones, and the learning process requires the appropriate knowledge and methods to produce an effective conceptual change towards a higher level of knowledge and better skills acquisition. To educate is to guide someone to go to a better state (at least, one estimates it is a better one), to achieve better skills, to understand better, to be better. This word "better" includes the notion of values.

Values are relative, they depend on the person development, his/her socio-cultural environment and learning context. Therefore, rules and values are strongly linked, in permanent interaction and registered in a continuous process associated to education. In this context, health education carries values that often are in conformity with those conveyed by families and some social and cultural organisations.

Previous studies have identified six axes of values, characterised by several pairs of poles (Carvalho & Carvalho, 2008):

- *Social/individual:* Global–Individual; Social change–Individual change; Social pressure–Individual free option; Social responsibility–Individual responsibility; Solidarity–Non-solidarity;
- *Salutogenic/Pathogenic*: Attitude–Technicism; Citizenship–Medicalisation; Dynamics–Statics; Positive–Negative; Resource–Finality; Subjective–Objective;
- *Holistic/Reductionist*: Cyclic–Linear; Coherence–Disarticulation; Multisectorial–Unisectorial; Process–Activities; Systemic–Monocausal;
- *Equity/Inequity*: Inclusion–Exclusion; Social justice–Social injustice; Tolerance–Discrimination; Universality–Partiality;
- *Autonomy/Dependence:* Active/Passive; Self-control–Hetero-control; Self-care–Hetero-care; Empowerment–Prescription; Literacy–Inculcation; Participation–Indifference;
- *Democratic/Autocratic*: Cooperation–Agreement; Bottom-up–Top-down; Lay person–Specialist; Informed option–Paternalism; Free option–Cohersive; Sharing–Absolute power.

Often tensions arise between social values (such as solidarity, respect for others) and individual values (such as autonomy, privacy) and in most societies, the social common values transcend the individual ones on the bases of democratic values, which are liberty, equality, justice, solidarity (Larue *et al.*, 2000). Being health a matter of social and individual challenges, health education is also a process involving the education for the values.

In the view of Meirieu (1993: 146) *it is in the heart of each educational activity that values can be appraised – maybe – transmitted*. He insists in the fact that it is not a mechanic transmission; it is a continuous practice, which depends on the organisation of the learning situation and which as not the goal of imposing any values but rather giving opportunity to pupils and young people to be aware of the values involved in particular situations, by interacting with the others, and to facilitate them to adhere to more appropriate values.

Nowadays, the construction of one's personal identity cannot be done by inculcation of a set of values and knowledge, it is rather to train for the *"conflict of ideas"*, allowing children and young people to express their contradictory worries about current and personal issues (sexuality, drugs addition, risk behaviours, etc.) in order to allow everyone to define his/her values and norms of behaviour (Galichet & Manderscheid, 1996).

Having all this in mind, health education cannot be carried out without an education for debate and learning how to manage conflicts. Often the conflicts are more than just differences of opinion or interests; they may be conflicts about legitimacy and norms. This education by debate requires, first of all, that children and young people acknowledge Health as a relevant issue for their lives. Health must be viewed as a permanent life issue, presenting a variety of aspects that can be a cause of health problems, which must be prevented or solved as early as possible. Therefore, every child and young people should become aware of this and construct his/her own values and behavioural norms by interaction with the others. It is in this context that health education contributes effectively in citizenship education, by allowing everyone to respect the other's values and, in this way, to understand them better.

HEALTH EDUCATION IN SCHOOL

Models of School Health Education

School education has been viewed in a large variety of perspectives. Recently, Eymard (2004) has described three models of education that can be associated with three models of health. *Instruction* is the traditional education model, where the learner is submitted to the current social norms, and the instruction aims at transmitting current knowledge (Nourisson, 2002; Eymard, 2004). The *personal development* model of health is based upon the constructivist perspective of learning (Eymard, 2004), where the learner assumes the role of promoting his/her own development, not only by using the acquired knowledge but also by having in mind both social needs and his/her own needs (Maslow, 1989). The third model of health education, *social interactions*, refers to socio-constructivism and aims at developing the learner's awareness of his/her autonomy and his/her social competences to make informed choices (Eymard, 2004).

The association of these three models of education (instruction, personal development and social interactions) with the three models of health referred above (see item 1 of this chapter) is helpful to identify the aims (or intentions for the activities) and the activities (or mobilisation of the educational and health resources) as presented in Table 1 (Pizon, 2008).

Table 1. Relation between educational models (Instruction, personal development and socio-interactions) and health models (biomedical, global and positive, and autonomy and citizenship).

Health models		
Biomedical	**Global and positive**	**Autonomy and citizenship**

Educational models

Instruction (transmission model)

Transmission of health knowledge to individuals and the group		
Aim: To prevent disease	Aim: To promote a global health	Aim: To help organising one's life style
Activity: To inform about diseases	Activity: To develop one's positive attitudes based on the knowledge	Activity: To allow one's decision based on the knowledge

Personal development (constructivist model)

Establish a pedagogical relationship on health with individuals and the group		
Aim: To guide against the diseases	Aim: To guide behaviours to adjust to the social rules	Aim: To facilitate one's decision making having in mind the social environment
Activity: To develop one's knowledge	Activity: To develop one's knowledge and society knowledge	Activity: To help one to know oneself and the world

Social interactions (socio-constructivist model)

Make the health issue a personal and collective project		
Aim: To make people query in order to control the absence of disease and the wellbeing	Aim: To lead to conform the attitudes and behaviours with the social rules	Aim: To let one's to make individual and collective choices, having in mind an ecological approach to health problems
Activity: To develop the individual and collective awareness of the problems of the fight against diseases	Activity: To develop the individual awareness to make one to be adapt to the environment	Activity: To develop one's autonomy to facilitate the individual and collective decision making regarding the individual and social health

*Adapted from Pizon, 2008.

In this view health education contributes to promoting the feeling of responsibility of one's own and the others' health, enabling each one to perceive critically each actual situation in order to adopt the most appropriate and efficient behaviour. In this view, health education is an education for the life of persons and communities, contributing for the learning of how to improve not only one's own physical health but also the interpersonal relationships, leading to a general improvement of the collective well-being (Laure *et al.*, 2000). Health education is addressed to the person as a whole, mobilises knowledge, beliefs, social representations,

behaviours, interactions with the physical and social environment. It is not to say what one must do, but rather to inform and to create the conditions for the person to acquire the competences for making (as much as possible) free choices for what he/she estimates it is healthier for him/her as well as for the others.

Several axes have been identified for the design and implementation of a school health education project (Jourdan & Victor, 1998). On one hand, to put into practice a health education project at the school global level implies to reflect about the whole school community, staff and pupils all together, and on the other hand to design classroom pedagogic activities appropriate to each school grade. For each health education activity one should have in mind the children's and young people's conceptions and their references of social practices, since health education touches the intimacy and the relationship of the body with him/herself as well as with his/her fears, anxieties, etc. In addition to all these personal issues, there are also aspects like the culture, the religion, the socio-economic conditions that have to be taken into account. The individual conceptions and beliefs may work as obstacles to the adoption of healthy behaviours. Therefore, asking questions or organising debates may allow children and young people to confront their points of view and what sustain them, i.e. their knowledge, their beliefs and their attitudes towards health risks or health problems.

Jourdan and Victor (1998) advocate the need for an ethical reflection within the school before the implementation of any school health project. It is not to impose behaviours that seem to be healthy to the educator nor to blame unhealthy behaviours. In the school it is important to respect the differences and the families' and pupils' free choices.

School health education is developed towards a global project, taking into account the children's and young people's physical, psychological and social dimensions and having the aim of promoting the well-being which is an important underneath condition for enhancing children's and young people's learning outcomes: building specific and generic competencies in knowledge and understanding, analysing and synthesising information and in creating solutions for local and global issues (IUHPE, 2008a).

The Nature of Knowledge in Health Education

The nature of knowledge in health education is rather particular for several reasons. Firstly, health issues are usually acquired by traditional means, mainly following family practices, and empirical knowledge, having little scientific bases. Often this traditional knowledge is an epistemological obstacle (Bachelard, 1938; Astolfi *et al.,* 1997) to the acquisition of new scientific knowledge.

Secondly, the source of the scientific knowledge to be transmitted in the field of health education is the biomedical knowledge, which, traditionally, is not devoted to the education perspective. Moreover, biomedical advices are usually formulated by reference to the current health problems, which often show up to be controversial with time (Sandrin-Berthon, 1997; Ewles & Simnett, 1999).

Thirdly, scientific knowledge concerning health issues is often manipulated by commercial lobbies, mainly from the agriculture, food and pharmacological sectors, addressing health misinformation in products advertising and propaganda (Souccar & Robard, 2004).

Finally, health scientific knowledge is usually statistically validated at the population level – Epidemiology, Public Health – identifying determining factors (age, sex, lifestyle, environment) for each disease, aiming at establishing a causal link between these factors and the disease growth (Vetter & Matthews, 1999; Helman, 2000). What is true in terms of the probability of a disease growth in a population cannot be applied be for a person individually.

Health education tends to be based on a topic approach, which means to work separately on issues like eating, safety, sexuality and relationships, substance use (smoking, tobacco, other drugs) bullying, etc. This topic approach has been criticised for several reasons: it can be *problematic or ineffective as such approaches are sometimes based on assumptions relating to human behaviour, which are difficult to justify and not supported by evidence* (IUHPE, 2008b: 4); adding up the teaching sequences of such diversity of topics represents a huge amount of time, which imposes limits to the teacher's action who tend to transmit information only (Pizon, 2008). Therefore, instead of an exhaustive approach, topic by topic, a more effective approach is to develop children and young people's life skills and competencies, enabling them to consider the different health topics in the reality of social and environmental contexts of their lives (IUHPE, 2008b).

Uniting themes, such as "learning how to take care of oneself and of the others" and "Preventing health risk behaviours", can cut across topics at a theoretical and pedagogical level (Table 2).

Table 2. Educative action aiming at "Learning how to take care of oneself and of the others" and at "Preventing health risk behaviours".

An educative action that promotes pupils' abilities • to make informed and responsible free choices • to develop their autonomy in health issues	
Learning how to take care of oneself and of the others	Preventing health risk behaviours

"Take care" do not lead to a standardised lifestyle. The educative action must not be normative since the weight of the social determinants and de diversity of the human situations is great.
 	
   The person must not be taken as the only responsible for his/her choices nor, in contrast, be considered as the victim of the social determinants that areabove his/her control. This idea of "take care" does not carry any moralist feature, it is rather centred on the ability of making choices and the responsibilities that are citizen's
	The health risk behaviours may be defined as "the person's exposition to a non negligenciable probability of being hurt or death, of damage his/her personal future or of put in danger is/her health".
	
	   They can be just isolated acts or long term installed habits. This definition has nothing to do with the legal or ilegal characteristics of the behaviours
	
	   This approach to the health risk behaviours has not a normative character and does not refer to a life "with no risk". It does not carry any moralist feature, it is

competencies.	rather centred on the ability of making
Health is not the objective of living, it is a resource for everyday life. In contrast to the health risk beahviours, the concerned health themes are not necessarily linked with the acute social problems.	choices and the responsibilities that are citizen's competencies. The concerned health themes are usually linked with the acute social problems.
– Eating – Hygiene – Life rhythm – Sexuality – Physical activity – Safety (at home, in road, at work) – First aid – Use of the health services – …	– Use of psychoactive substances, legal or iligal (substance abuse, risk consumption) – Violence addressed against oneself or the others – Dangerous behaviour on the roads and in the sportif activities – Sex risk behaviours – …
In both cases it is not possible to refer an univoque csuality. There are always interactions between the behaviours and the persons' specificities, their life history and the environmental determinants.	
In both cases, the school action refers to the citizenship and to learn how to live together. It is inscribed in the double goal of creating conditions for pupils to learn and to develop their personal competencies.	

*Adapted from Pizon, 2008.

Prevention of Health Risks

Being the health education aim not centred on the disease neither on the risk behaviours but rather on the people's empowerment, it means that just transmitting knowledge about the different risk behaviours in the classroom is not enough. The basis to undergo a sustainable and effective prevention to health risks is mostly centred in how a person is able to keep his/her freedom towards an unhealthy product or behaviour, by developing this or that responsible attitude in relation to him/her and to the others (Pizon, 2008).

Some theories (Bantuelle & Demeulemeester, 2008) have helped to clarify about the interacting factors that may facilitate the development of risky behaviours, and three factors have been recognised (Marcelli & Braconnier 2000):

i) *Associated to the person*, it refers to a historic moment of the person with week self-esteem, self-depreciation, timidity, excessive emotionality, difficulties to face daily events, difficulties to establish stable and satisfying relationships, difficulties to solve interpersonal problems.

ii) *Associated to the type of risk behaviour*, it refers to the three types of substance consumption: *occasional* or *festive*, for new sensations and getting the feeling of group belonging; *self-therapeutic*, usually consumed in privacy, to reduce anxiety or sleeping trouble; drug-addiction, looking for an anaesthetic effect,

either in privacy or in group, often leading to the marginalisation or exclusion from the social system.

iii) *Associated to the environment*, it refers to the family and pairs close influence as well as the wider socio-cultural and media influences.

For the prevention of risk behaviours the above factors must be considered. Educators must have in mind all the above factors when implementing pedagogic activities on the prevention of risk behaviours in the classroom, which are associated to knowledge, attitudes and awareness. These three approaches are shown in Figure 2 and can be described as follows:

i) *To approach the problems caused by substance misuse – scientific knowledge*: implement pedagogical approaches on physical, psychological and social dimensions of the risk behaviours effects, based in scientific knowledge. Attention must be paid to ethical issues concerning potential effects of the approach regarding the stigmatisation of the smoker, the drunken or the drug-abuser.

ii) *To develop personal and social competencies – Attitudes*: developing self-esteem, stress management, risk management, conflict management. These competencies empower children and young people to make informed decisions, to make choices, to take actions and to develop positive attitudes facing health risks.

iii) *To approach the environmental context – awareness:* making children and young people aware of their specific familiar and close social environment to identify critical situations facilitating the risky behaviour. It implies developing critical thinking.
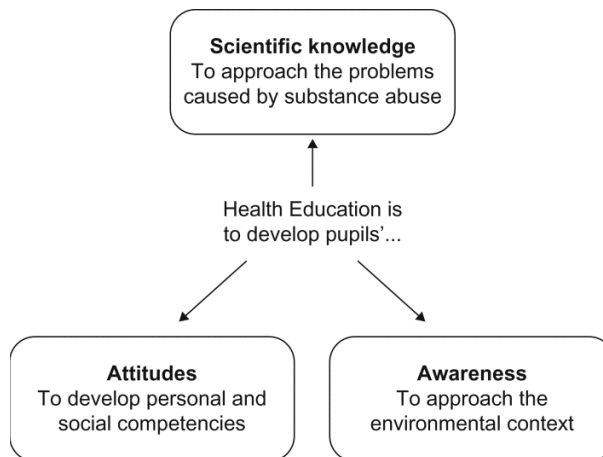
Figure 2. Dimensions to have into account in school activities for the prevention of health risk behaviours.

Effectiveness of Health Education Practices

Assessment of the effectiveness of health education practices has been a matter of some evolution. In the decade of the 80s it was strongly connected to *evidence-based practices*, which is based on the experimental methodology currently used in epidemiology and uses prominently quantitative methods such as randomized clinical trials (RCT) (Vetter & Matthews, 1999; Helman, 2000; McQueen, 2007). It assumes, for example, that effective programmes in a given classroom situation can be directly transferable to another one.

More recently, *good practices* is a matter of great attention, being mainly a qualitative approach in study cases (Barnekow et al., 2006), assuming that health education (as well as prevention of risk behaviours) is determined by the socio-cultural context, considering that it is not correct to generalise data emerged from a given situation.

Between these two poles there are several evaluation methodologies that have been implemented attempting to get relevant information concerning the efficacy of health education programmes. In the past decades there has been a tendency to apply multiple approaches to assess effectiveness of health education/health promotion initiatives, so that in addition to RCT, other methodological approaches have been put into practice such as quasi-experimental designs, observational studies and story-telling (Naidoo & Wills, 1994; Katz & Peberdy, 1998; Ewles & Simnett, 1999; Barnekow *et al.*, 2006; Campostrini, 2007; Dooris *et al.*, 2007; Leger *et al.*, 2007; McQueen, 2007; Mittelmark, *et al.*, 2007; Potvin *et al.*, 2007; Ridde *et al.*, 2007; Rootman, 2007; Salazar *et al.*, 2007).

Behavioural change evaluation has been a common way to establish the relevance of health education programmes. However, this is a rather reductionist approach and other elements of evaluation must be added (INSERM, 2001):
– Knowledge acquisition;
– Attitude changes - with a gradation of responses;
– An assumed/expressed behaviour change;
– The acquisition of competencies to react towards challenging situations;
– Change of several personal features – such as the intention to acquire a given behaviour, the feeling of efficiency to react face a challenging situation, the self-esteem – which can be quantified by using validated psychometric scales.

A vast amount of efforts has been employed intending to classify the types of interventions or programmes in the prevention of health risks (reviewed by Pizon, 2008). Battjes (1985) has proposed four approaches: rational approach, developing approach, social rules approach, and the social reinforcement approach. Hansen (1992) has enumerated a list of 12 items concerning information, decision, engagement, values clarification, definition of objectives, stress management, self-esteem, resilience, general competencies, rules awareness, coaching and alternative activities. Tolber (1997) has distinguished interactive programmes from non-interactive ones.

In general, studies on the effectiveness of the prevention of health risk behaviours have shown contrasting results (St Léger, 1998; Lister-Sharp *et al.*

1999; INSERM, 2001; WHO 2006): certain pedagogical activities have some positive effect, others have no effect at all and yet other ones have a negative effect. Therefore the great challenge is to identify better not only the nature of the teaching practices impact but also the school social context, especially health promotion, which represents an important scientific issue.

Paradigms Underlying Teachers' Health Education Practices

Several works (Joudan & Vitor, 1998; Mérini et al., 2000; Berger & Jourdan, 2008) have shown that in teachers' view, to work in health education is a question of state of spirit, which is reflected in the school practices by endorsing the dialogue, the positive attitudes, the respect for the rules of living together, the increase of pupils' learning and development, all this in a friendly atmosphere within a framework of health promotion.

Recent research has identified four paradigms underlying the teachers' interventions in health education (Fortin, 2004): the rational, the humanist, the social-dialectic and the ecological paradigms.

The *rational paradigm* is based on the transmission of information from the teacher to the pupils, in a vertical perspective. It is an approach of health education where it is assumed that the acquisition of knowledge is the important issue to develop appropriate attitudes and behaviours towards health risks. This paradigm is inspired on the biomedical model of health, using the discourse of advising about diseases and prevention of diseases. It comes from a scientific model of thinking which postulates the rationalisation of the attitudes as being taken outside the context and the affective dimensions. Being within the biomedical model (see item 1.2 of this chapter), where the power is given to the professionals, there is no space for people to decide for themselves. People are supposed to submit to the norms and the victims of disease are often blamed for having not complied with the norms, the well-known expression: "victim-blaming" (see also item 3.3 of this chapter). This paradigm has inspirited health education interventions envisaging the information concerning the health risks and the adoption of appropriate behaviours to prevent them. This is a linear view of cause – effect (Fortin, 2004).

In contrast, in the *humanist paradigm*, in which persons participate in their knowledge construction to which they add their life experience. A person's wishes, emotions and perceptions are taken into account. This paradigm envisages the development of one's personal and social competences, having in mind one's values. Thus the goal is the development of a person's self-esteem and social skills. The aim is one's autonomy, associated to a freedom for self development. In this model, persons are responsible for their health and they assume their conduct and behaviour, even those at risk. It is intended to develop motivating and deciding factors so that persons are able to adopt recommended healthy lifestyles. A health risk challenge is assumed as a motivational factor by increasing fear to the unhealthy situation. In extreme situations this model may rise freedom issues since some persons' responses may go up to "refusing the treatment, refusing to live" (Fortin, 2004: 60).

The *social-dialectic paradigm* concerns the person's relationship with his/her social environment regarding the degree of freedom within a social group. This model is interested in the person's ability to manage his/her life and to change or cope with the environment. The weight of the socio-cultural context is taken as an important factor in the learning process, leading to a contextualization of the educative practices which are imbedded in the individual and collective living experience. This paradigm, inspired in the socio-cognitive models, gives priority to the person's affective dimension and its role in interpersonal relationships. The teacher has a central role in facilitating pupils' cognitive, emotional and social development (Favre, 2007; Lenoir & Vanhulle, 2008). The concept of empowerment (Naidoo & Wills, 1994; Tones & Tilford, 1994; Katz & Peberdy, 1998; Ewles & Simnett, 1999; see item 1.4 of this chapter) is included in this paradigm of health education and health promotion, which is based on the:

> *process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment (WHO, 1986: 1).*

Finally, the *ecological paradigm* is interested in the person, seen as a whole, and in the person's relation with the overall environment (ecosystem). This paradigm is based in the Edgar Morin (1994)'s reflections about the systemic process and its complexity. It retakes the previous paradigms features but it adds up a dynamic and contextual dimension, as earlier described for the health promoting schools (see item 2.1 of this chapter). This holistic model of health education underlines the difficulties and limits of the rationalisation for the human behaviours. It emphasises emotions and desire, which are usually ignored by health education teachers, due to their difficulties in managing these issues. This model gives particular attention to the persons' attitudes in relation to the health issues. Teachers are not centred in the pupils' changes to healthier behaviours; they are rather working with the pupils towards their awareness of the health issues (including health risks) and help them to develop conscious healthy attitudes and to become empowered for making informed decisions for adopting or not healthy behaviours, having in mind the whole pupils' life context, either individually or in group (ecosystem).

Each one of these health education paradigms implies a set of pedagogical practices tightly linked to the conception of health, of health education and of the school role in health education. As schools are not primarily concerned with the improvement of children's health, health education is rather dependent of the way teachers perceive their mission, as well as the whole school setting.

Teachers' Role and Teachers' Training in Health Education

Several factors influence the way in which health education and health promotion programmes are developed and implemented in school, being the teachers' beliefs and their motivation for health education a decisive factor for effective

implementation of such health education programmes. Therefore technical support (training and assistance) given to teachers is critical for a sustainable school health education. This is why teachers' training is often considered to be a central factor linked to the quality of health projects implementation. Several studies have shown that teachers who have received health promotion training tend to be involved more frequently in health promotion projects and have a more comprehensive approach to health education (Anastácio et al., 2005; 2008; Jourdan et al., 2008).

For a teacher, who has many priorities in school affairs, including building literacy and numeracy skills; scientific and artistic competencies; societal, historical and cultural dimensions, and who have in fact to provide the means for all to succeed, it is not easy to have a clear view of his/her own contribution to health promotion (Jourdan et al., 2008). School systems are essentially based in subject matters (or disciplinary approaches) in contrast to the holistic feature of health education which requires an interdisciplinary approach, putting together the knowledge from different disciplines and the development of personal and social competencies. The hard issue for the teachers is not so much to teach the knowledge but to develop pupils' attitudes, to discuss values and choices in order to promote healthy habits. It is to put into place pedagogical situations where pupils can elaborate *"rational opinions"* based in scientific knowledge and to allow pupils to become aware of this or that burning health issue and to promote appropriate conditions for pupils to develop skills to face these health issues. In this process of health education, each pupil mobilises, for each health issue, his/her acquired knowledge, system of values and representations. Therefore this pedagogical approach represents a rupture with the traditional subject matter teaching and learning process.

In this perspective of health education, defining the teacher's role is rather delicate for several reasons. Firstly, health and health education lies at the intersection between the private (pupils' family) and public domains (public health policies), related to behavioural issues which are determined culturally and to the most intimate of personal decisions. Furthermore, in health domains, recommendations change over the years given the extraordinary progress in knowledge and the construction of new scientific models as well as fashions governing what is considered to be moral and what is considered to be immoral. In addition, in the contemporary world, where the importance of appearance is becoming more pronounced, where many consider a perfect body and perfect health to be the ultimate aim, can it be hoped that schools will contribute to the promotion of a single healthy mode of living or a body cult?

In the field it is not easy to identify the school's mission in an environment marked by the power of the models transmitted by Medias. The position of teaching staff is, therefore, difficult to maintain. The first aim of teacher training in health promotion is then to help them to have a clear view of their mission and its ethical limits. Before giving them methodological tools, teacher training aims at helping them build their professional identity (Jourdan et al., 2008).

The way in which health promotion is organised and implemented in each country differs depending on the history, objectives and structures of that country's

school system (Pommier & Jourdan, 2007). Developing research, affirming and reinforcing the work done in teachers' training in health education are major issues to promote teachers' competencies for providing opportunities to children and young people to be more empowered about health and health risks as they grow up.

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