Health Education in school
Teachers' and future teachers' conceptions
(Europe, Africa and Middle East)

Graça S. Carvalho
LIBEC-CIFPEC IEC
Universidade do Minho, Braga, Portugal.

Dominique Berger
IUFM Université Lyon 1, France.
JE 2432, PAEDI.

I. Introduction

Health Education is determined not only by the social context (i.e. the living conditions at the school, the attention paid to the pupils' health and wellbeing, Allensworth and Kolbe, 1987; Gold, 1994) but also by the teaching pedagogical practices. In the 20th century the Education systems of western countries have developed important actions to improve persons' health and to promote healthier life-styles. Since children and young people from most diverse social and cultural backgrounds spend most of their daily life at school, these institutions have been seen as a privileged setting for identifying children's health needs and implementing health education interventions.

II. From the traditional Health Education to the holistic view of Health Promotion

A high public investment in the second half of the 20th century has been devoted to national infrastructures and services to protect health and to prevent diseases. Simultaneously, and due to the high costs in the health sector, the argument that "prevention is cheaper than curing" persuaded the national health authorities to extend their work beyond the prevention of diseases towards the notion of improving health through health education (Katz and Peberdy 1997; Green 1999), such as family planning, venereal disease, accident prevention, vaccination, female cervical smear checks, weight control, alcohol consumption and smoking (DHSS 1976). This view of health education is well inscribed in the classical "biomedical model of health".

In the 70s high emphasis in health educational campaigns was done in order to transmit information about diseases and the ways to prevent them, mostly by promoting behaviour changes. In general these educational programmes focused on the transmission of information – or knowledge – without accounting for pupils' socio-economic contexts, so that the impacts in terms of healthier behaviour changes were not significant (Scriven 1996). This narrow emphasis on the absence of diseases or infirmity as well as on the personal life-styles became criticised in the 1970s it distracted attention from the social and economic determinants of health and tended to blame individuals for their own illness (Ewles & Simnet 1999).

A broader approach of "health promotion" emerged in the 1980s, addressing not only the transmission of knowledge (traditional health education) but also the need for political and social action as well as the involvement of the persons themselves in shaping their own health future. In this period, and with the urgency to prevent the AIDS dissemination, the role of health education became socially more important and a new generation of interventions have been set up, mainly based on attitude and behaviour changes (Mérini et al., 2004; Broussouloux & Houzelle-Marchal, 2006). These educational campaigns have had in mind not only the social context but also the need for pupils' empowerment for making healthy choices (Jones & Naidoo, 1997; Ewles & Simnett, 1999).

The high social impact of this area of knowledge and social intervention lead to an immensity of attempts to define "Health Education", most of them based upon the close-related concept of "Health Promotion" defined by the World Health Organisation (WHO, 1986:1): *"Health promotion is the process of enabling people to increase control over, and to improve, their health"*. Of the several proposed definitions of Health Education (O'Donnell, 1989; Green & Kreuter, 1990, 1991, among others) we wish to highlight the one by Keith Tones e Sylvia Tilford (1994:11):

> *"Health Education is any intentional activity conducting to health and disease learning, producing changes in knowledge and understanding as well as changes on the way of thinking".*

III. The theoretical framework of the present study

The same authors (Tones & Tilford, 1994) further stated that health education may (or may not) clarify and influence values, may (or may not) promote beliefs and attitude changes, may (or may not) enable acquisition of personal skills and it can conduct to healthier behaviour and lifestyle changes. This view embraces the idea that knowledge, values and behaviours/practices are important issues for an effective health education. Similarly, the Clément's KVP model claims that for any person's "Conception" three distinct dimensions are interacting, namely his/her "Knowledge" (K), his/her "Values" (V) and his/her "Practices" (P) (Clément 2006).

We intend to analyse teachers' conceptions about health education according to the Clément's KVP model. The present work was carried out within the European FP6-STREP project Biohead-Citizen ("Biology, Health and Environmental Education for better Citizenship" - CIT2-CT2004-506015; Carvalho *et al.* 2004). For this purpose we questioned teachers of 16 countries: from Europe (West to East: Portugal, France, Italy, Malta, Germany, Poland, Hungary, Romania, Lithuania, Estonia, Finland, Cyprus), from Africa (West to East: Senegal, Morocco, Tunisia) and from the Middle East (Lebanon).We aim to analyse differences in teachers' conceptions (and future teachers' conceptions) about health and health education with regard to several influencial parameters: country, religion, level of God belief, level of religious practice, political view, and teachers' academic degree.

IV. Methodology

The questionnaire includes questions on Biology, Health and Environmental Education as well as Personal Information and was designed by all the research teams of the Biohead-Citizen Project. The original English version was translated into each national language and after validation of the translation it was pre-tested before implementation in each country (Clément et al. 2007).

Six samples were collected in each of the 16 contributing countries: in-service (In) and pre-service (Pre) teachers of primary school (Ps) and of secondary schools (Ss) in biology (B) and national language (L).

The overall corpus includes 6377 responders. The number of responders in Europe were (from West to East): 350 from Portugal (PT), 732 from France (FR), 559 from Italy (IT), 198 from Malta (MT), 365 from Germany (GE), 311 from Poland (PL), 334 from Hungary (HU), 273 from Romania (RO), 316 from Lithuania (LI), 182 from Estonia (EE), 306 from Finland (FI) and 322 from Cyprus (CY). From African countries the following responders were obtained (West to East): 324 from Senegal (SN), 330 from Morocco (MA) and 753 from Tunisia (TN). From the Middle East country, Lebanon (LB), 722 responders were obtained.

We investigated 17 questions on Health Education (cf. annex): A55, A63, A67, A68, B1, B2, B6, B9, B12, B15, B16, B21, B22, B23, B25, B26, B27. All questions, except A55, A63, A67 and A68, were coded from 1 to 4, from "I agree" to "I disagree", in a Likert scale.

Similarly, we also analysed the following socio-political questions (cf. annex): A15, A29, A26, A34, A37, A42, A48, A51 and P6 to P11.

Multivariate analysis allows representing the most structuring components of variation in the individuals' answers. Statistical multivariate analysis has become a standard to investigate complex data featuring the behaviour of many individuals, according to many variables (Lebart et al., 1995). Here variables are questions in a questionnaire for which we gathered answers. To analyse the health education answers, we used the principal component analysis (PCA, Lebart et al., 1995). Variables were coded as numbers. We further performed a between group analysis (Dolédec & Chessel, 1987) in complement of the initial PCA (which differentiate all the persons) to show differences between groups' conceptions (groups of countries, samples of teachers, level of training, religions, and faith). Each between groups analysis was completed by a randomisation test (Monte Carlo) to analyse the levels of significance differences between groups. When two variables can be in interaction, we will suppress the effect of one by orthogonal PCAIV to analyse the effect of the second variable independently to the first suppressed one.

V. Results

5.1. Health education conceptions in 16 countries: Biomedical model and Health promotion approach

Health education is a very complex area of research where it is possible to identify several axes of values defined by specific poles (Carvalho & Carvalho, 2005). Question A63 concerns the poles of the "biomedical model" and the "health promotion" approaches (Jones & Naidoo, 1997; Ewles & Simnett, 1999; Carvalho et al., 2007). Results from question A63 on Biomedical model (BM) and health promotion (HP) approaches show very significant differences among teachers and teachers to be from the 16 **countries**, when codes 0, 1, 2 and 3 are analysed separated ($X^2 = 904.1$, df = 45, p value $<2.2 \times 10^{-16}$). Grouping the codes 0+1 of BM and grouping the codes 2+3 of HP, the differences among countries responders are also significant ($X^2 = 665.5$, df = 15, p value $<2.2 \times 10^{-16}$). This distribution of BM/HP in each country is shown in Figure 1, where Tunisia is strongly BM (90.0% BM / 10.0% HP) whereas Lithuania (33.5% BM / 66.5% HP) and Finland (33.6% BM / 66.4% HP) are close to the health promotion pole.

The northern countries Finland, Lithuania and Hungary as well as Cyprus (with strong British influence) are closer to the health promotion pole whereas Central Europe countries, namely Romania, France, Germany and Poland, as well as Tunisia (with strong French influence) are closer to the biomedical model perspective.

Figure 1. Percentage of BM (blue) and HP (pink) answers in the 16 countries.
Numbers represent BM percentages.

In addition, the statistical analysis showed that the conceptions of Biomedical model (codes 0+1) and health promotion (codes 2+3) are more associated to the countries rather than to the responders' **religion** (question P13). However significant differences (X^2 = 149.3, df = 3, p value <$2.2x10^{-16}$) were also found, being the Christians closer to the health promotion pole than the Agnostics or the Muslims. The latter are more associated to the biomedical pole.

Significant differences (X^2 = 35.7, df = 4, p value = $3.246x10^{-07}$) are also found in the **religious practice** (question P12), and results show that those that practice more their religion (codes 1+2) are closer to health promotion than those that do not practice it.

These results altogether indicate that the country effect is stronger than the religious effect as far as the biomedical model and health promotion conceptions are concerned: for instance Poland and Romania are Christian countries, but in the biomedical pole. In the Muslin countries, Tunisia is more biomedical than Morocco. We also analysed how the conceptions on the Biomedical model and health promotion are associated to the **groups of teachers** (question P1): in-service (In) and pre-service (Pre) teachers, of primary school (Ps) and of secondary schools (Ss), in biology (B) and national language (L). There are statistical differences among the teachers' groups (X^2 = 55.5, df = 5, p value = $9.903 x10^{-11}$) and results show that the primary school teachers (Ps), both in-service (Ps-In) and pre-service (Ps-Pre), are more associated to the health promotion pole than all the secondary school (Ss) teachers: in-service Biology (Ss-In-B), in-service Language (Ss-in-L), pre-service Language (Ss-Pre-L) and pre-service Biology (Ss-Pre-B) teachers.

The effect of the **level of teachers' training** in both conceptions of the biomedical model and health promotion was also investigated (question P5). Since only a few responders were included in code 1 (secondary education), this was amalgamated with code 2 (university 1-2 years). Thus, for the analysis we have four groups (Fig.2): P5.1. "secondary education + university 1-2 years"; P5.2. "university 3-4 years"; P5.3. "university 5-6 years" and P5.4. "longer education". Significant differences were found among groups (X^2 = 60.5, df = 4, p value = $2.2x10^{-12}$), and Figure 2 shows that the higher the level of university (or high school) training the closer teachers are of the Health promotion approach.
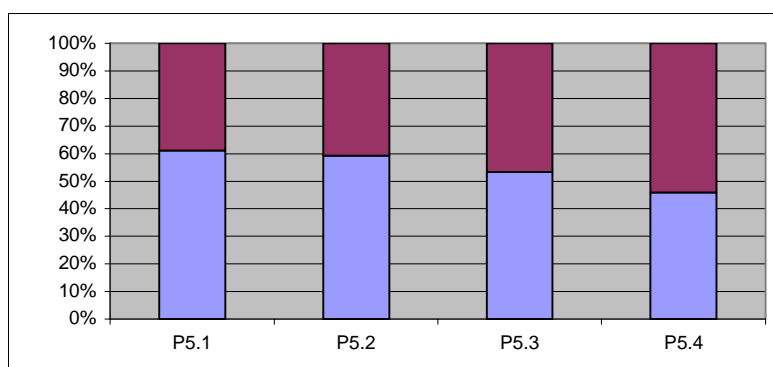
Figure 2. Percentage of BM (blue) and HP (pink) answers in each group of teachers' training level.
Numbers represent BM percentages.
P.5.1 - "secondary education + university 1-2 years";
P5.2. "university 3-4 years";
P5.3. "university 5-6 years";
P5.4. "longer education".

We further analysed the effect of the responders' **childhood environment**, *i.e*. where teachers and future teachers lived in their infancy: question P14. "Rural countryside", "Town, small city", "Centre of a large city" and "Suburbs of a large city"). No significant differences were found between groups (X^2 = 5.3, df = 3, *p* value = 0.148) indicating that the childhood environment is not relevant for the persons' perception about health education. This result reinforce the just above finding regarding the great importance of person's training to become more and more aware of the wide perspective of health education, i.e. towards health promotion perspective.

"**Autocratic/Democratic**" is another important axis in Health Education (Carvalho & Carvalho 2005). In the present work we asked if "Only a strong central power can put some order in my country" (question A42) to be correlated to the Biomedical model and health promotion conceptions. The differences are significant (X^2 = 25.9, df = 3, *p* value = 9.9×10^{-06}) and results show that those responders that are for a central power (codes 1+2) are closer to the Biomedical model rather than the health promotion approach. This is an interesting expected result since the Biomedical model is characterised by the leadership of the health professionals whereas person's empowerment underpins the health promotion approach (Jones & Naidoo, 1997; Katz and Peberdy 1997; Ewles & Simnett, 1999; Carvalho, 2002, 2006; Carvalho & Carvalho, 2006).

5.2. *Further analysis of Health education conceptions in 12 countries: Multivariate analysis*

Most of the Health Education questions were included in part B of the questionnaire. Only 12 countries applied both parts A and B of the questionnaire in a total of 5187 responders: Portugal (PT), France (FR), Italy (IT), Hungary (HU), Romania (RO), Estonia (EE), Finland (FI), Cyprus (CY), Senegal (SN), Morocco (MA), Tunisia (TN) and Lebanon (LB) (see "IV. Methodology" for the number of responders per country).

The analysis carried out in this section concerns 4 questions of the questionnaire A (A55, A63, A67, A68) and 13 questions of the questionnaire B (B1, B2, B6, B9, B12, B15, B16, B21, B22, B23, B25, B26, B27) making a total of 17 questions, which were applied to 5187 individuals of the above 12 countries. Similarly, we also analysed the following socio-political questions: A15, A29, A26, A34, A37, A42, A48, A51 and P6 to P11.

Figure 3 represents the between analysis on countries, where it is possible to see that axis F1 is strongly structured by the questions (by deceasing importance):

B26: *"Health education at school mainly involves developing the personal skills of pupils such as self esteem or stress management"*;

B1: *"Health Education at school improves pupil behaviour"*;

B22: *"Teachers should not be obliged to teach health education if they do not feel confident"*;

B16: *"I should use olive oil more often in my food"*

Questions B26, B1 and B22 are related to school health education aims, which characterises the F1 axis.

The axis F2 is structured not only by the above B1 and B22, but also by the questions:

B25: *"I should eat more fresh vegetables"*.

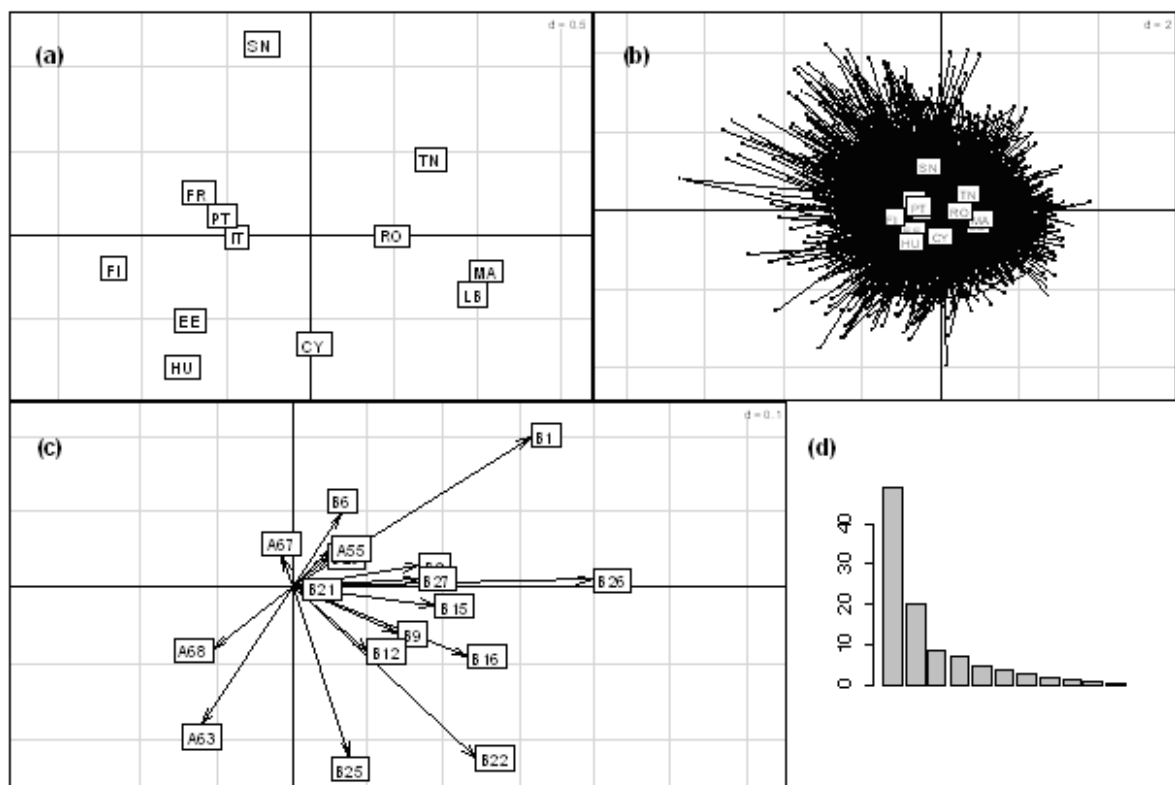A63: *"Health can be seen in several perspectives"* (see Annex).

Figure 3. Between analysis applied to *Countries*.

     (a) and **(b)** show the position of the gravity centre of each country on the F1-F2 axis.

     In **(b)**, each point is a person, linked to the gravity centre his/her country. An ellipse is surrounding the 2/3 persons of each country. The name of countries may be sometimes hidden, but it can be read on **(a)** which shows the same information but enlarged.

     (c) Answers to questions are represented by vectors, where the arrow corresponds to "I agree" for the Likert scale (see "IV. Methodology"). The arrow position indicates the contribution of this question to each axis, by vector projection on either axis.

     (d) Histogram of the eigenvalues, expressed as percentage of the variance of successive components. The two major components constitute the two axes of charts (a), (b) and (c).

Charters (a) and (b) of Figure 3 show that Finland, Estonia and Hungary (and, in a lower degree, France Portugal and Italy) responders are not associated to the idea that school health education should provide pupils' personal skills (B26) or improve pupils' behaviour (B1). In contrast, the non-European responders from Morocco, Lebanon and Tunisia (and, in a lower degree, Romania) are in favour of developing these pupils' skills.

The distribution of countries obtained with the Religion effect (Figure 3) or without it (Figure 4) is somehow similar, although showing some differences. In both Figures 3 and 4, Finland, Estonia and Hungary are opposite to the other countries (axis F2, mainly due to questions B1 and A63). However, without religion (Figure 4), a new opposition is emerging through the axis F1 as compared to Figure 3: Cyprus joins the other Mediterranean countries (Lebanon, Morocco); Tunis joins the Latin countries (Portugal, Italy, France) and Romania (central Europe) is contrasting with Senegal (Western Africa). The latter is mainly due to question B22 where Senegal is against *"Teachers should not be obliged to teach health education if they do not feel confident"* as well as against the idea of needing to eat more fresh vegetables (B25) and olive oil (B16).

These results are in agreement with the above analysis (item 5.1) where we noticed that the effect of Countries on health education questions was stronger than the one of Religions.
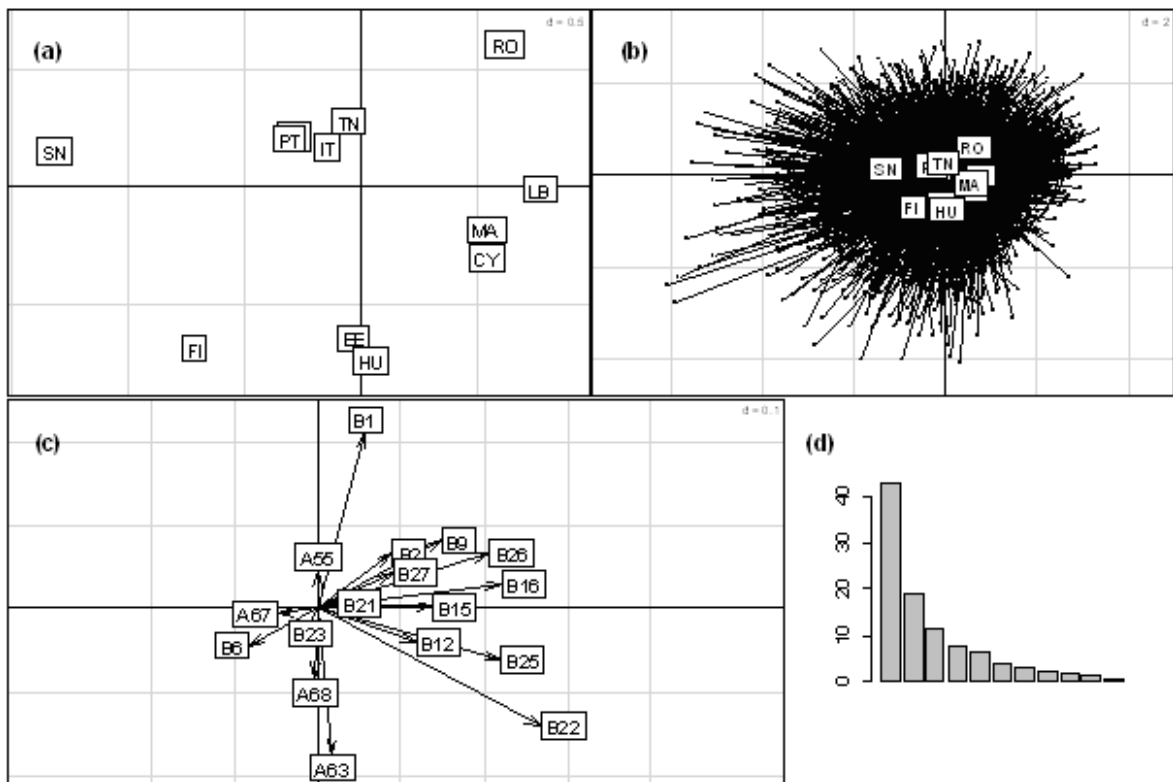

Figure 4. Between analysis applied to *Countries* after suppression of the effect of the variable religion by orthogonal PCAIV.
For further information see legend to Figure 3.

Figure 5 represents the between analysis on groups of teachers, where it is possible to see that axis F1 is strongly structured by the following 4 questions, two related to implementing health education and the other two concerning healthy food:

B22: *"Teachers should not be obliged to teach health education if they do not feel confident"*;

B09: *"I would like to eat less meat"*;

B27: *"It is exclusively the family's responsibility to deal with health education"*;

B06: *"It would be good to put more fat in my food"*.

The F2 axis is structured by the following questions, one associated to policies and the other with the role of health education:

B23: *"Schools have to take into account public health policies"*;

B01: *"Health Education at school improves pupil behaviour"*.

All the in-service teachers of Primary school (InP), of Biology (InB) and of Language (InL) are clearly separated, along the Axis F1, from all pre-service teachers of Primary school, Biology and Language, respectively PreP, PreB and PreL. The results show that pre-teachers think that health education should be taught at school, not only by the families, and that teachers should be obliged to teach it even if they do not feel confident in doing it. In contrast, teachers with teaching experience are more defensive in this respect, assuming exactly the opposite.

Comparing to Biology (PreB and InB) and Primary school teachers (PreP and InP), both language pre-service teachers and in-service teachers (PreL and InL) are more in favour that schools take into account public health policies (B23) and they do not believe that Health Education improves pupils' behaviour (B1).
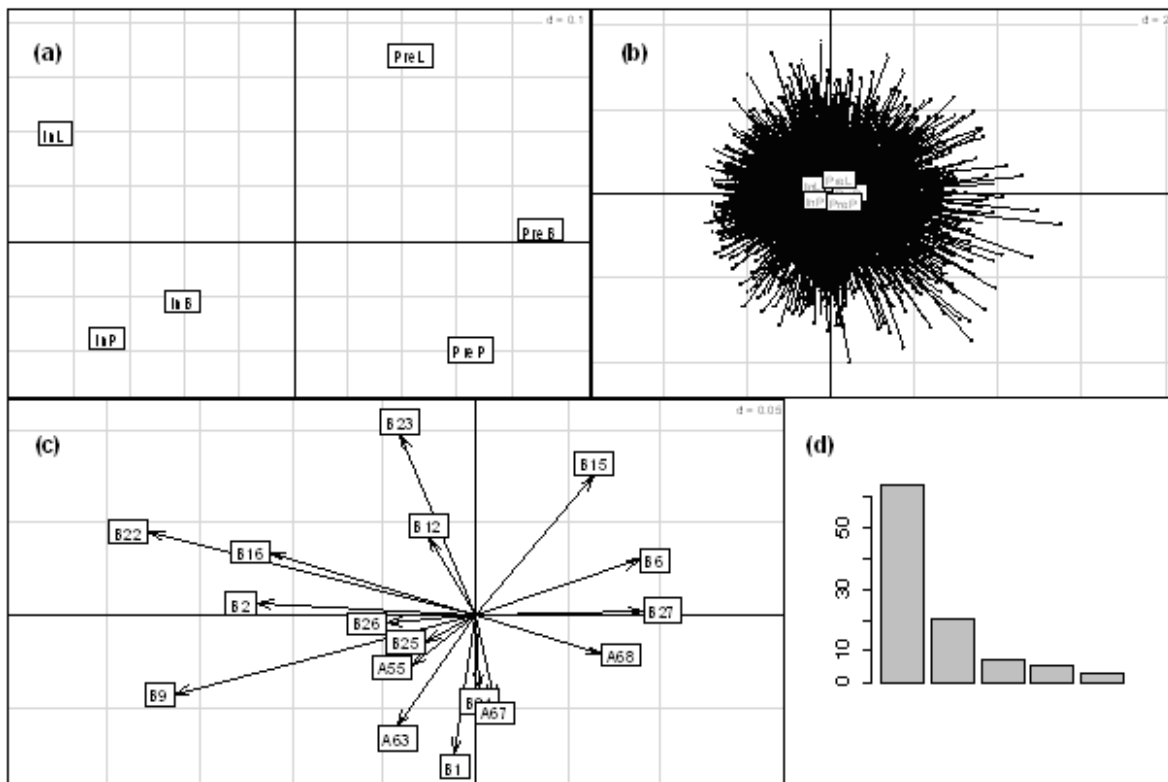

Figure 5. Between analysis applied to *Groups of teachers.*
          InP = In-service Primary school teachers;
          InB = In-service Biology teachers;
          InL = In-service Language teachers;
          PreP = Pre-service Primary school teachers;
          PreB = Pre-service Biology teachers;
          Pre-L = Pre-service Language teachers.
          For further information see legend to Figure 3.

The co-inertia analysis (Figure 6) allows maximizing the correlations between differences in health education conceptions and the differences on political views. This correlation is maximal at the axis F1 (Figure 6-c). The main questions that structure this axis F1 are again (chart (a) of Figure 6):

B26: *"Health education at school mainly involves developing the personal skills of pupils such as self esteem or stress management";*

B01: *"Health Education at school improves pupil behaviour"*;

And also:

A63: *"Health can be seen in several perspectives:…"*. (See Annex).

A68: *"If possible, we should walk more instead of using cars because…"*. (See Annex).

The chart (b) of this Figure 6 shows that this axis corresponds to the following political positions:

A34: *"The government must make laws favouring the creation of firms to stimulate our economy"*;

A42: *"Only a strong central power can put some order in my country"*.

And also:

A51: *"Science and religion should be separated"*.

A37: *"Religion and politics should be separated"*.
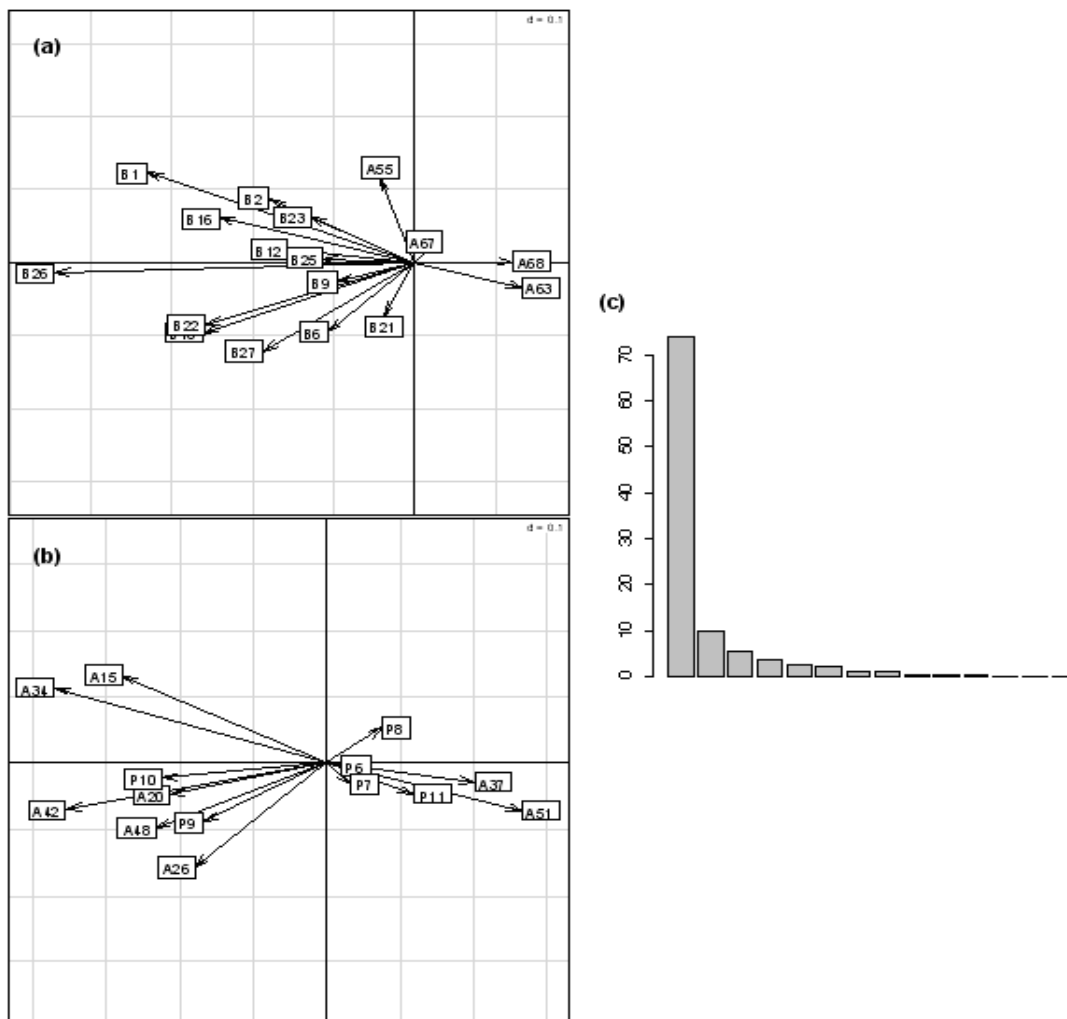
Figure 6. Co-inertia analysis applied to *Health education variables* (a) and to *Political variables* (b).

In contrast, the questions concerning teachers' involvement in environmental protection activities (P6, P7, P8) have little influence in structuring this axis F1, indicating that their practices in such activities is not associated to theirs health education and political perspectives.

The critical questions concerning Health Education in school (Figure 6-a), especially improving pupils' personal skills and self-esteem (B26) and improving pupils' behaviour

(B1) correspond to an equivalent political point of view (Figure 6-c) of creating firms to stimulate the economy (A34) and a strong central power to put order in the country (A42). On the other hand, both questions related to health promotion (A63, A68) can be correlated to both political perspectives of separation between science and religion (A51) and separation between religion and politics (A37).

In other words, the teachers' views about improving pupils' personal skills (B26, B1) being correlated to their views about a strong central power promoting enterprises setting up to develop the country economy (A42, A34) suggests that teachers' Health Education perspective seeks for promoting individual empowerment for both self-development and economy development.

VI. Conclusions and Implications for the future

The fact that the primary school teachers are closer to the health promotion pole than the secondary school teachers is a very interesting finding as it is in agreement with our previous study on textbooks (Carvalho et al., 2007) showing that, likewise, primary school textbooks of the 16 countries are more linked to the health promotion concept than the secondary school textbooks.

Authors and publishers of all these countries seem to have a similar perspective in terms that for earlier years the textbooks must be more devoted to pupils' good health and healthy habits whereas for older ages the textbooks must give more emphasis to the transmission of knowledge about diseases (Pathologic), treatments (Curative) and disease prevention (Preventive) in order to make young people aware of unhealthy habits. Similarly, teachers' conceptions gathered in the present study indicate that not only the authors and publishers (Carvalho et al., 2007) but also teachers and future teachers see health promotion as a perspective for health education more appropriate in primary school than in secondary school.

The emphasis in the Health promotion perspective, rather than in the Biomedical model, is a matter that should be taken into account in the countries national programmes/syllabuses as well as in teachers' training. In fact this study has shown that higher level of teachers' training contributes to make them to look at health education in a wider perspective rather than in the narrow view of the biomedical model, as previously found in other different studies (Jones & Naidoo, 1997; Katz and Peberdy 1997; Ewles & Simnett, 1999; Carvalho, 2006; Carvalho & Carvalho, 2006).

In contrast to northern European countries, teachers from non-European countries were shown to be in favour that school health education should provide pupils' personal skills and improve pupils' behaviour. At first sight, these are unexpected findings since several data have shown that the European countries, in particular the northern countries (Finland, Hungary, Estonia), have a traditional closer approach to health promotion (Carvalho et al., 2007), where the pupils' personal skills are being developed. Therefore the present results deserve a further investigation to understand if these teachers' answers are associated to what it is really carried out in their country schools or, alternatively, it is what they think it should be done in contrast to what actually is being implemented in schools. This is to say that the responders of European countries (especially the northern ones) would like to see health education to include more biomedical information whereas the non-European responders would like to see more implementation of pupils' personal skills. This is a matter of further investigation.

The present study also showed that the Country effect is stronger than the Religion effect on Health Education teachers' conceptions. In contrast, the Religious effect has shown to be much stronger than the Country effect in similar Sex Education studies (Berger et al.,

2007), indicating that the values associated to Religion have more influence in Sex Education views rather than in Health Education. Therefore, it seems that the socio-political history of the Country may play a major role in teachers' conceptions about Health Education. Better clarification of the socio-cultural and political factors influencing the teachers' conceptions about Health Education and Sex Education are the matter of on going analysis.

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Annex - Questions used in this work

		QUESTIONNAIRE 'A' : (Transversal + Environmental Ed.)						
A15.	A priority of the government must be to guarantee resources for health protection of the poor.	I agree					I don't agree	
A20.	My government should compel all immigrants to learn to speak, to read and to write in (my state language).	I agree					I don't agree	
A26.	There are too many foreigners in my country: the government should limit immigration.	I agree					I don't agree	
A34.	The government must make laws favouring the creation of firms to stimulate our economy.	I agree					I don't agree	
A37.	Religion and politics should be separated.	I agree					I don't agree	
A42.	Only a strong central power can put some order in my country.	I agree					I don't agree	
A48.	Direct democracy (without government involvement) is the ideal solution to managing our society.	I agree					I don't agree	
A51.	Science and religion should be separated.	I agree					I don't agree	

A55. In your opinion, the main goal of health education in school should be (tick only **ONE** of the four boxes)**:**

Providing knowledge [ ] [ ] [ ]   Developing behaviour that is respectful of one's own health

A63. **Health can be seen in several perspectives. In the list below, tick the <u>THREE</u> expressions that you think are the most strongly associated with your** *personal view of health:*
- ☐ Not suffering from any serious disease.
- ☐ Feeling at peace with myself.
- ☐ Enjoying my life without feeling too much stress.
- ☐ Having my body components working well.
- ☐ Being in good condition to be socially active.
- ☐ Having no need to see a doctor, for treatment.

A67. **We must keep the air-pollution in cities under control because** (tick only **ONE** statement that you personally consider to be the most important) **:**
- ☐ the homes of citizens who live close to streets will be polluted.
- ☐ legislation defines maximum levels of air-pollution.
- ☐ inhaling poisonous gases causes illnesses.
- ☐ health costs are increased because air pollution.

A68. **If possible, we should walk more instead of using cars because** (tick only **ONE** statement that you personally consider to be the most important) **:**
- ☐ this may save the money that we spend on cars.
- ☐ by doing this we get to feel better.
- ☐ by this way we keep air cleaner for everybody.
- ☐ we are fed up with driving and parking rules.

		QUESTIONNAIRE 'B' : (Biology + Health Ed.)						
B1.	Health Education at school improves pupil behaviour.	I agree					I don't agree	
B2.	I would like to eat fish more often.	I agree					I don't agree	
B6.	It would be good to put more fat in my food.	I agree					I don't agree	
B9.	I would like to eat less meat.	I agree					I don't agree	
B12.	I would like to eat more fruit.	I agree					I don't agree	
B15.	It is chiefly up to the school nurse and doctor to provide health education.	I agree					I don't agree	
B16.	I should use olive oil more often in my food.	I agree					I don't agree	
B21.	Health education at school must be restricted to providing scientific information (diet, sleeping cycle, drug risk).	I agree					I don't agree	
B22.	Teachers should not be obliged to teach health education if they do not feel confident.	I agree					I don't agree	
B23.	Schools have to take into account public health policies.	I agree					I don't agree	

B24.	Psychological and social aspects of sex education should be taught primarily by health professionals (doctor, nurse).	I agree					I don't agree
B25.	I should eat more fresh vegetables.	I agree					I don't agree
B26.	Health education at school mainly involves developing the personal skills of pupils such as self esteem or stress management.	I agree					I don't agree
B27.	It is exclusively the family's responsibility to deal with health education.	I agree					I don't agree

QUESTIONNAIRE 'P' : (Personal information, also anonymous)

P1. You are: (to be adapted by each team)

☐ A Student training to become a Primary School teacher (pupils less than 11-12 years old)

☐ A Student training to become a Secondary School teacher (students from 12 years old to 18 years old)

☐ An in-service Primary School teacher

☐ An in-service Secondary School teacher

If you are at the Secondary level, what subject matter do you teach: ☐ Biology only   ☐ Biology and other

☐ National Language ☐ National Language and other

☐ Other (specify): _____

P5. What is your highest level of education?

☐ Secondary education   ☐ University 1-2 years   ☐ 3-4 years   ☐ 5-6 years
☐ longer (specify) _____

Are you involved in activities pertaining to environmental conservation and/or sustainable development? (Tick only **ONE** box in **EACH** line)

		Often	Sometimes	Never
P6.	At home, in your family, in your local community			
P7.	In an organisation (formal or informal)			
P8.	Professionally			

Which institution you trust more: Public or Private? (Tick **ONE** box in EACH line)

P9.	Public schools					Private schools
P10.	Public health services					Private health services
P11.	Public pension					Private pension

P12. (Tick one box in **EACH** line):

| I believe in God | | | | | I don't believe in God |
| I practise religion | | | | | I do not practise religion |

P13. **Are you?** (tick only **ONE** box):
        ☐ Agnostic/Atheist
        Christian: ☐ Catholic   ☐ Protestant   ☐ Orthodox   ☐ Other (specify): _____
        Moslem: ☐ Sunnite   ☐ Shiite   ☐ Druze   ☐ Other (specify): _____
        ☐ Jewish
        ☐ Other religion/belief (specify): _____
        ☐ I don't want to answer

P14. **In which kind of environment did you spend most of your childhood?**
        ☐ Rural countryside   ☐Town, small city   ☐Centre of a large city   ☐Suburbs of a large city