Research Article

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Journal of Healthcare Communications
ISSN 2472-1654

2015
Vol. 1 No. 1:4

DOI: 10.4172/2472-1654.10004

# Health and Sexuality Education in Portugal: Principal's, Teacher's, Parent's and Student's Perceptions

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**Citation:** Clement M, Olumide O, Georgina O, et al. Serological Evidence and Risk Factors Associated With Hepatitis E Virus Infection in Pigs and Human at an Intensive Piggery Complex, Lagos Nigeria. J Healthc Commun. 2016, 1:1.

## Abstract

Sexuality is an ongoing and permanent process of socialization that should provide young people with knowledge, attitudes and skills that allow them to make responsible choices. This research aimed to describe Sexuality Education integrated in a Health Education context in four perspectives: school boards (through principals), teachers, parents and students. Three studies were conducted for the sake of this research. The samples included 84 school principals (study 1), 401 teachers and 65 parents (study 2) and 3494 students (study 3). Results showed that overall most schools implemented and evaluated Health Education and Sexuality Education, though teachers need training and families still don't engage in Sexuality. In addition, students who reported having had Sexuality Education classes during the last years reported a lower rate of sexual intercourse, a lower rate of having initiated their sexual life at 11 years old or younger, and higher mean total score for knowledge regarding HIV/AIDS transmission/prevention as well as higher mean total score for attitudes towards people living with HIV. In general, it can be stated that the action of schools within the promotion of Health and Sexuality Education was meeting the ministerial recommendations in 2010; however, a special concern is due regarding not only "if", but "how" these recommendations were implemented, since the quality and the conditions of the implementation can optimize or compromise a sustainable action. One example is the low political engagement in the issue, which is translated in lack of teachers' training, lack of time allocated to the subject in teachers' timetables, lack of money attributed to schools to develop programs and finally lack of official recognition of its broad importance for students' global well-being and health.

**Key Words:** Health education; Sexuality education; Principals; Teachers; Parents; Students

**Received:** October 01, 2015; **Accepted:** November 20, 2015; **Published:** November 27, 2015

## Introduction

### Health education in school context

School must contribute to the health and well-being of its students. In recent decades, a lot of research has been devoted to this question, identifying the programs that are based on a holistic dimension as the most effective ones [1-7]. One of the most proven strategies to promote health and well-being of young people is education and the promotion of Health Education in school context. In this regard it should be noted that the promotion of Health Education integrates several areas, namely Nutrition, Physical activity, Sexuality, STIs, HIV, Substance use, Violence at school, and mental health, from which Sexuality, STIs and HIV have been prioritized [5]. In addition, the Ministry of Education established measures and specific guidelines regarding both the promotion of Health Education and Sexuality Education in a school context. These include a) the inclusion of Health Education in the School's Educational Project, b) the appointment of a coordinating teacher, c) the existence of mechanisms of evaluation, d) a minimum of six hours a year of Sexuality Education in the elementary school (first six years of school) and

a minimum of twelve hours a year in the other school levels. e) Sexuality Education should be provided in a non-disciplinary curriculum area as well as f) cross-sectionally in all the school subjects contemplating Sexuality Education topics. g) In addition schools should create an office (the Health Office) to provide support to students, at an individual level, thus guaranteeing that their individual needs such as the clarification of doubts and the referral to structures such as the local Health Centre are made whenever necessary; and h) compete for budget allocation to the promotion of Health Education [8].

A study conducted in 2006 [7] showed 78.9% of schools contemplated the promotion of Health Education in the School's Project. Considering the eight areas within the promotion of Health Education, it was found that Nutrition (87%) and Sexuality (85.7%) were the most frequently addressed topics. According to the school boards it was in school subjects such as Natural Sciences (89.6%) and Physical Education (64.9%) that most of the contents related to the promotion of Health Education were addressed. And 24.7% already reported having a students' Health Office, thus already complying with some of the major guidelines from the Ministry of Education.

### Sexuality education in the school context

Sexuality Education is an ongoing and permanent process of socialization that should provide young people with knowledge, attitudes and skills that allow them to make responsible choices and give them the opportunity of living their lives in a healthy way [9]. According to literature, increasing young people's knowledge about safer sex may motivate preventive attitudes and behaviors [10], which explain that increasing their knowledge about HIV/AIDS transmission routes and stimulating positive attitudes towards HIV infected people is a crucial goal in Sexual and Reproductive Health.

Assuming that having sexual intercourse in adolescence is a risk behavior, since adolescents are still maturing in terms of physical, emotional and cognitive development and therefore are more likely to become infected with HIV and other sexually transmitted infections, unwanted pregnancy and abortion, some researchers believe that one of the goals of Sexuality Education should be postponing sexual intercourse [11]. In fact, young people have been pinpointed by several organizations and the millenium goals on sexual health for 2015 as a priority in terms of prevention [12-14].

Based on the previous problems, this research aimed to describe Sexuality Education integrated in a Health Education context in four perspectives: school boards (through principals), teachers, parents and students.

## Methodology of Research

### Overall methodology: Health behavior in school-aged children (HBSC) study

The Health Behavior in School-aged Children (HBSC) is a World Health Organization (WHO) collaborative cross-national study [15] carried out every four years in 44 countries to study school-aged behavior regarding health and risk behaviors in adolescence. Besides collecting data with adolescents, it also collects data with school principals, teachers and parents in order to enquire about health promotion issues on a national level. All the studies conducted for the sake of this paper come from the last available HBSC wave.

### Study 1

This specific study was conducted in Portugal in order to describe the situation of Health Education in school according to the school boards' perspective and used the same schools randomly selected for HBSC study.

### Study 2

Study number 2 aimed to evaluate the promotion of Health Education in schools and the perceptions that teachers and parents have about Health Education and Sexuality Education in the school context and used the same schools randomly selected for HBSC study, plus focus groups.

### Study 3

Study 3 was intended to assess the importance of Sexuality Education and its effects in knowledge, attitudes and behaviours regarding HIV among adolescents. Students were enrolled in the same schools randomly selected for HBSC study.

All studies had the approval of a scientific committee, an ethical national committee and the national commission for data protection, and followed strictly all the guidelines for human rights protection.

### Participants

Samples were extracted from various types of participants, as it was intended to have a multi-informants methodology.

### Study 1

Eighty-four school principals distributed proportionally by all the educational Portuguese regions participated in study 1. They represented schools from elementary to secondary education (46.4% represented school groupings with all school levels, from elementary to secondary school levels; 34.5% school groupings with elementary school levels only; and 19.1% represented secondary schools only).

### Study 2

Study 2 comprised two stages: first a quantitative stage, and second a qualitative one. Three hundred and twenty nine teachers distributed proportionally by all the educational Portuguese regions participated in the first stage. They represented all school levels with the exception of primary school. Around forty percent (39.8%) taught in school groupings with both elementary and secondary school levels, 39.5% in school groupings with elementary school levels only and 20.7% in school groupings with secondary school levels only.

Seventy two teachers and 65 parents participated in the second stage of this study. The group of teachers was constituted by 14 male teachers and 58 female teachers aged between 27 and 55 years old. As for the parents, 12 fathers and 53 mothers aged between 34 and 52 years old participated in the qualitative study.

The groups were exclusively constituted by either teachers or parents in order to facilitate discourse [16].

## Study 3

As for the adolescent sample, this study used a subset of 8th and 10th graders (n=3494), 45.6% attended the 8th grade (middle school) and 54.4% attended the 10th grade (secondary school) and were distributed proportionally by all the educational Portuguese regions. This sample included 53.6% girls and 46.4% boys, whose mean age was 13.80 and 15.9 years (standard deviation 0.80 in both cases) for 8th and 10th graders, respectively (**Table 1**).

## Instrument and procedures

This Nationwide Survey was conducted by the University of Lisbon for the Ministry of Portuguese Health and for the National Coordination for HIV/AIDS Infection, through the High Commission for Health (National structure). In the 2010 wave of the HBSC Portuguese survey, 139 schools were randomly selected from the official national list of public schools, stratified by region. Participant schools received a questionnaire for principals (study 1), a questionnaire for teachers (study 2) and a questionnaire for students (study 3).

## Study 1

Schools received an extra questionnaire to inquire school principals about local policy regarding Health Education [17]. Besides characterizing the schools, it included questions that assessed the school's role in Health and Sexuality Education, namely by a) identifying mechanisms that ensured the implementation of Health Education, b) the school subjects where topics related to Health Education were implemented, c) the curricular non disciplinary areas where topics related to Health Education were reinforced, d) the strategies implemented in Health Education, e) topics addressed in Health Education, f) the principals' perceptions regarding the involvement of the teachers, the students and their families to Health Education, and g) teachers' training needs in the Health Education field.

## Study 2

Study 2 had two stages – a quantitative and a qualitative one. In the quantitative stage, schools received questionnaires to inquire school teachers about Health Education, and Sexuality Education in their schools, namely questions that assessed teachers' perceptions of the school's role, their own role and the degree of involvement of other actors such as students and their families [18]. In the second stage, 12 focus groups (6 groups of teachers and 6 groups of parents) were conducted in 2 schools in the area of Lisbon. The script questioned about overall teachers' and parents' involvement in Health Education and Sexuality Education, difficulties addressing Sexuality, and role played by the family and the school.

## Study 3

The sampling unit used in this survey was the class. In each school, classes were randomly selected for each grade, according to the international research protocol [19]. The questionnaire was carried out by school teachers and it was constituted by items that assessed sexual behavior, and two scales: one to assess knowledge regarding HIV/AIDS transmission/prevention and another one to assess attitudes towards people living with HIV.

## Data analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS) version 22. Means, standard deviations, frequencies and other descriptive statistics were performed to characterize the samples as well as to examine principals' and teachers' perceptions in studies 1 and 2 (quantitative). For study 2, NVIVO was also used to chategorize teachers' and parents' responses. As for study 3, a scale of nine items was used (range: 0 to 9 points) in order to assess knowledge concerning HIV/AIDS transmission routes, and a scale of five items (range: 5 to 15 points) to assess attitudes towards HIV infected people. Risky sexual behavior was measured through having ever had sexual intercourse, age of first sexual intercourse, contraceptive method used in last sexual intercourse, and having ever had sexual intercourse under the influence of alcohol or drugs. Sexual behaviour, knowledge and attitudes were compared between the students who reported having had and the ones who reported not having had Sexuality Education classes during the last school years using Chi-square ($\chi^2$) tests.

# Results

## Study 1- Principal's opinions regarding health education in the school context

Principals referred that most of the schools they represented appointed a coordinating teacher for Health Education (92.9%), included Health Education in the school's Educational Project (88.1%), implemented the teaching hours of Sexuality Education defined by law (63.4%), and had mechanisms of evaluation for Health Education (53.1%). They also referred that the school subjects where topics related to Health Education were implemented were Natural Sciences (84.1%) and Physical Education (61.0%) and that these topics were reinforced mainly through Civic Education (78.3%) and Project Area (78.3%). As for the strategies most commonly used to implement Health Education, they highlighted actions and conferences by external health staff (96.4%), project methodology (71.1%), active learning methodologies (68.7%), lectures (65.1%) and the use of the internet/library (62.7%). Most school principals referred the existence of Health Education offices in the school groupings (71.4%). From a list of 8 topic areas that have been prioritized for Health Education, the most commonly addressed topics were Nutrition (96.4%), Sexuality (86.7%), Substance Use (81.9%) and Physical Activity (80.7%). As for the involvement of the educational community to Health Education, principals considered that teachers' involvement was average/good (54.4%/32.9%, respectively), students' was average/good (39.2% /53.2%, respectively) and parents' was weak/average (39.2%/40.5%, respectively). They also referred Sexuality (57.1%) was the field of Health Education teachers needed more training (**Table 2**).

**Table 1** Socio demographic characteristics of samples, according to study.

| Study 1 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Participants | N | % | | | | | | | | | |
| Principals School levels | 84 | 100 | | | | | | | | | |
| Elem[1] | 29 | 34.5 | | | | | | | | | |
| Elem – Second[2] | 39 | 46.4 | | | | | | | | | |
| Second[3] | 16 | 19.1 | | | | | | | | | |
| **Study 2** | | | | | | | | | | | |
| **Quantitative study** | | | **Qualitative study** | | | | | | | | |
| **Participants** | **N** | **%** | **Participants** | **N** | **%** | | **N** | **%** | | | |
| Teachers School levels | 329 | 100 | Teachers Gender | 72 | 52.5 | Parents Gender | 65 | 47.5 | | | |
| Elem[1] | 130 | 39.5 | Male | 14 | 19.4 | Male | 12 | 18.46 | | | |
| Elem – Second[2] | 131 | 39.8 | Female | 58 | 80.6 | Female | 53 | 81.54 | | | |
| Second[3] | 68 | 20.7 | | | | | | | | | |
| **Study 3** | | | | | | | | | | | |
| Middle School | | | | | High School | | | | | Total | |
| | N | % | M | SD | | N | % | M | SD | N | % |
| Participants Students | 1594 | 45.6 | | | Participants Students | 1900 | 54.4 | | | 3494 | 100 |
| Gender | | | | | Gender | | | | | | |
| Male | 781 | 49.0 | | | Male | 841 | 44.3 | | | 1622 | 46.4 |
| Female | 813 | 51.0 | | | Female | 1059 | 55.7 | | | 1872 | 53.6 |
| Age | | | 13.8 | 0.8 | Age | | | 15.9 | 0.8 | | |

[1]Elementary
[2]From Elementary to Secondary
[3]Secondary

## Study 2- Teacher's and parent's opinions regarding health education and sexuality education

Overall, quantitative results concerning the school's role in the teachers' perspective were similar to the ones already reported by school principals. Consequently, these will not be repeated.

As for the quantitative results regarding the teachers themselves, it was observable that 25.8% of teachers stated having had specific training in Sexuality Education, 39.5% reported being aware of Sexuality Education related topics in the school subjects they taught, pinpointed Sexuality as the most difficult Health Education topic to address (47.4%), and identified, from a checklist, being "fairly or very difficult" to liaise with students' families (no matter the topic) (67.4%) and providing Sexuality Education classes (35.9%). In relation to questions regarding the education community's involvement to Health Education, teachers' considered teachers' overall involvement as "average or good" (43.5%/37.9%, respectively), parents' as "weak or average" (39.7%/46.1%, respectively) and students' as "average or good" (38.6%/45.3%, respectively) (**Table 3**).

## Study 2

Study 2 also included qualitative results that assessed teacher's and parent's perceptions regarding each other's and their own involvement in Health Education and Sexuality Education, as well as difficult topics to address in Health Education. Teacher's involvement was considered "weak" by teachers and, from a list of eight topic areas that have been prioritized for Health Education, Sexuality was the topic considered by teachers as the most difficult to address, mainly due to lack of scientific training, fear of not knowing how to answer students' questions, feeling uncomfortable (especially in Sexuality), being afraid of parents' reaction, and inexistence of textbook to guide them through the topics.

Teachers' involvement was considered "good" by parents since, in parents' opinion, teachers have had training, have easier access to knowledge and resources, and it's easier to address these topics within a group (the class). Both teachers and parents considered parents' involvement as "weak", the first justified it with parents' lack of time, the assumption that parents may think it's the schools' duty and not their own, not feeling comfortable addressing Health Education, and not feeling prepared for addressing it; the latter justified it firstly with not feeling comfortable addressing it and secondly lack of preparation and of time.

Sexuality was the Health Education topic considered the most difficult to address both by teachers and parents, though parents added "Sexually Transmitted Infections" as part of the topic. The teachers referred the same reasons they had previously identified for their weak involvement in Health Education while the parents

**Table 2** Results for study 1- principal's opinions regarding health education in school context.

| Mechanisms that ensure the implementation of Health Education[1] | N | % |
|---|---|---|
| Appointment of a coordinating teacher | 78 | 92.9 |
| Inclusion of Health Education in School's Educational Project | 74 | 88.1 |
| Implementation of number of teaching hours defined by law | 53 | 63.4 |
| Mechanisms of evaluation | 45 | 53.1 |
| Specific budget for HE | 25 | 29.8 |
| **School subjects where topics related to Health Education are implemented[2]** | | |
| Natural Sciences | 71 | 84.1 |
| Physical Education | 51 | 61.0 |
| Reinforcement of topics related to Health Education[2] | | |
| Civic Education | 66 | 78.3 |
| Project Area | 66 | 78.3 |
| **Strategies implemented in Health Education[2]** | | |
| Actions and conferences by external health staff | 81 | 96.4 |
| Project methodology | 60 | 71.1 |
| Active learning methodologies | 58 | 68,7 |
| Lectures | 55 | 65.1 |
| Internet/Library | 53 | 62.7 |
| Existence of Health Education Office[1] | 60 | 71.4 |
| **Topics addressed in Health Education[1,3]** | | |
| Nutrition | 81 | 96.4 |
| Sexuality | 73 | 86.7 |
| Substance use | 69 | 81.9 |
| Physical activity | 68 | 80.7 |

**Involvement of educational community to Health Education**

| | Weak | | Average | | Good | | Excellent | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| Teachers | 5 | 6.4 | 46 | 54.4 | 28 | 32.9 | 5 | 6.3 |
| Students | 2 | 2.5 | 33 | 39.2 | 45 | 53.2 | 4 | 5.1 |
| Parents | 33 | 39.2 | 34 | 40.5 | 16 | 18.9 | 1 | 1.4 |

| **Teachers' training needs in the Health Education field[2]** | | |
|---|---|---|
| Sexuality | 48 | 57.1 |

[1]Percentage of participants that answered affirmatively.
[2]Referred to by at least 50% of the participants.
[3]Complete list of Health Education topics: Nutrition, Physical activity, Sexuality, STIs, HIV, Substance use, Violence at school, and Mental health.

explained that the difficulty was related to the nature of the topics as addressing them involved expressing inner feelings and intimacy (**Table 4**).

## Study 3 – Differences between having/not having had sexuality education classes and students' sexual behaviors, knowledge regarding HIV/AIDS transmission/prevention, and attitudes towards people living with HIV

The majority (65.9%) reported having had Sexuality Education classes in the last school years. Of the adolescents that reported having had Sexuality Education classes, 80% referred that they had never had sexual intercourse. A significant variation was found between having/not having had Sexuality Education in terms of having had/not having had their first sexual intercourse ($\chi^2$ (1) = 5.13; p=0.024) with students who reported having had Sexuality Education reporting a lower rate of having had their first sexual intercourse.

Of those who have ever had sexual intercourse, most often those who had Sexuality Education in school context started their sexual life later (at 14/15 years old, and at 16 or later), although these changes were not statistically significant. Nevertheless, sexual initiation gained statistical relevance when the group of students who reported having had their first sexual intercourse at age 11 or earlier was observed, since it was significantly lower in the group who reported having had Sexuality Education in school context (5%) compared with the group who did not (9.4%). Regarding the use of condoms and of the contraceptive pill at last sexual intercourse, although no statistically significant differences were found, there was an increase in the use of these for those who reported having had Sexuality Education in the school context (condom use - with Sexuality Education: 96.1%, without Sexuality Education: 93.1%; pill use - with Sexuality Education: 53.9%, without Sexuality Education: 50%). This pattern was also observed regarding sex associated with alcohol and drugs (with Sexuality Education: 10.1%, without Sexuality Education: 14.8%).

**Table 3** Quantitative results for study 2: Teacher's opinions regarding health education and sexuality education.

| Questions concerning school's role | N | % |
|---|---|---|
| Mechanisms that ensure the implementation of Health Education | | |
| Inclusion of Health Education in School's Educational Project[1] | 323 | 98.2 |
| Appointment of a coordinating teacher[1] | 270 | 82.1 |
| **Strategies implemented in Health Education[1]** | | |
| Actions and conferences by external health staff | 290 | 88.1 |
| Family participation | 236 | 71.7 |
| Health Education office | 206 | 62.6 |
| Project methodology | 205 | 62.3 |
| Others (Cross-sectional methodology, peer education...) | 38 | 11.6 |
| Existence of Health Education Office[1] | 230 | 69.9 |
| Interdisciplinarity of the Health Education office[1] | 136 | 59.1 |
| **Constitution of the Health Education office[1]** | | |
| Teachers (Natural Sciences, Biology and Languages) | 172 | 74.8 |
| Psychologysts | 146 | 63.5 |
| Nurses | 40 | 17.4 |
| Social workers | 18 | 7.8 |
| Doctors | 2 | 0.9 |
| Others (students, nutricionist...) | 25 | 10.9 |
| **Questions concerning the teachers themselves** | | |
| Having had Sexuality Education specific training[1] | 85 | 25.8 |
| Awareness of Sexuality Education Topics in school subjects taught by the teacher[1] | 130 | 39.5 |
| **Health Education topics considered difficult to address by teachers** | | |
| Sexuality | 156 | 47.4 |
| Substance use | 79 | 24 |
| STIs and HIV | 69 | 21 |
| Body image | 62 | 18.8 |
| Hygiene | 60 | 18.2 |
| Physical Activity | 51 | 15.5 |
| Violence | 49 | 14.9 |
| Nutrition | 18 | 5.5 |

| **Health Education/Sexuality Education situations that are considered difficult to handle by the teacher[1]** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fairly/Very difficult | | Somewhat difficult | | Not very difficult | | Not difficult at all | | | | | |
| | N | % | N | % | N | % | N | % | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Liaise with student's families | 213 | 67.4 | 77 | 24.4 | 22 | 7 | 4 | 1.3 | | | | |
| Provide Sexuality Education lessons | 109 | 35.9 | 88 | 28.9 | 64 | 21,1 | 43 | 14.1 | | | | |

**Questions concerning the educational community**

Involvement of educational community to Health Education

| | Weak | | Average | | Good | | Excellent | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| Teachers | 36 | 11.3 | 138 | 43.5 | 120 | 37.9 | 23 | 7.3 |
| Students | 35 | 11.0 | 122 | 38.6 | 143 | 45.3 | 16 | 5.1 |
| Parents | 123 | 39.7 | 143 | 46.1 | 40 | 12.9 | 4 | 1.3 |

[1]Percentage of participants that answered affirmatively.

The mean total score for knowledge regarding HIV/AIDS transmission/prevention was 5.32 (SD=2.60) with adolescents who reported having had Sexuality Education classes at school showing significantly more knowledge (M=5.81, SD=2.38) than adolescents who reported not having had Sexuality Education classes [(M=4.49, SD=2.74; (t (1771.5) = -12.895, p<0.000)].

The mean total score for attitudes towards people living with HIV was 12.84 (SD=2.24) with adolescents who reported having had Sexuality Education classes at school showing significantly more tolerant attitudes (M=13.18, SD=2.10) than adolescents who reported not having had Sexuality Education classes [(M=12.28, SD=2.35; (t (1868.9) = -10.304, p<0.000)] (**Table 5**).

## Discussion

The goal of this study was to describe Sexuality Education integrated in a Health Education context in four perspectives: school boards (through principals), teachers, parents and students.

The results of the studies helped confirm that more and more schools were contemplating the promotion of Health Education in the School Project, fulfilled the hours of Health Education and Sexuality Education stipulated in the law, provided evaluation mechanisms, appointed a teacher coordinator of the promotion of Health Education and had (students') health office comprising an interdisciplinary team, with teachers, psychologists and nurses, among others. However, according to the representatives of the school boards (the principals), despite the possibility of budget allocation to the promotion of Health Education, there wasn't a specific budget in this area in most schools.

In 2010 the school subjects that had previously been almost exclusively responsible for the implementation of Health Education (Natural Sciences and Physical Education) slightly lost their centrality in comparison to 2006 as the curricular areas (Civic Education and Project Area) strengthened the promotion of Health Education, as advocated by a group of experts in the field of Health Education (GTES). In general, it can be stated that the action of the schools within the promotion of Health and Sexuality Education was meeting the ministerial recommendations in 2010 [8], since most of the guidelines were being implemented.

Several authors [20] identified the teacher as a central player in the success of Sexuality Education in school context. Bearing in mind the results of the studies, it was found that teachers generally reported having little specific training in the area, and did not show knowledge of the topics of Sexuality Education in the subjects they lectured at the time of data collection.

Even when referring specifically to teachers who teach in the area of Sexuality Education, according to representatives of the school boards, only 35% had specific training, which contradicts the spirit of the guidelines [21] and the recommendations of the GTES [3-5], which prioritize training in Sexuality Education and propose that Sexuality Education is (also) implemented in the various subjects cross-sectionally. Therefore, it is important to highlight the importance of specific training in the area and it is suggested that the training centers for teachers seek to boost it. This question is clear to school boards when they stress Sexuality as a priority need in terms of training in the areas of Health Education.

In terms of involvement of teachers to promotion of Health Education, it is considered "average" according to the perception of the representatives of school boards and "average" or "good" in the perceptions of teachers and parents. According to the

perceptions of parents, teachers engage in Sexuality Education because they are well prepared scientifically, have easy access to the necessary resources and address Sexuality Education in the context of the class group, avoiding the discomfort of a more personalized approach. The teachers who were interviewed in the focus groups had a different perception of the involvement of teachers in general, considering that it was insufficient and presented as reasons: lack of technical and scientific training, lack of comfort addressing the issue, the potential disapproval of parents, and lack of resources as a textbook, however, this group consisted of present or former members of students' Health Offices, or Health Education coordinators, so their experience may have promoted greater awareness of the importance for Sexuality Education making them, consequently, more demanding compared with others.

In terms of situations that pose a difficulty, in general, teachers identified as quite or very difficult to liaise with families and the promotion of Sexuality Education sessions. Furthermore, from a list of eight areas to address in Health Education, teachers pinpointed once again Sexuality in terms of difficulty of approach.

While accepting that the school is an institution with responsibilities in relation to the promotion of Health and Sexuality Education, the family is recognized as the privileged context for the development of healthy attitudes and skills, either in general terms or in terms of Sexuality. Parents' involvement in the promotion of Health Education and Sexuality Education is considered "average", according to the perception of school board principles and "average" or "weak" according to the perception of teachers and parents. According to the teachers and parents surveyed, the reasons for the poor involvement of the parents to the promotion of Health Education is due to lack of time, lack of comfort in addressing these issues with their children, lack of scientific training, and also, according to the teachers, to the belief that all education is an obligation of the school.

Other aspects have also reinforced the idea of little parents' involvement in the promotion of Health and Sexuality Education: the perception of teachers that the relationship with families is rather (or very) difficult to establish. Thus, the need to promote training in Sexuality Education for parents is crucial, especially on how to improve parents' skills and how to seize the opportunities of providing Sexuality Education with their children. Considering that Sexuality Education in schools is an opportunity to provide Sexuality Education in family too [22], the reasons to prioritize it in the school context are strengthened.

To study the influence of Sexuality Education in the school context in sexual behaviors, knowledge and attitudes, group comparison between those who reported having had and those who reported not having had Sexuality Education classes in recent years was used. In general, students who reported having had Sexuality Education in the school context mentioned less often having sexual intercourse than those who did not report having had Sexuality Education. Of those who have ever had sexual intercourse, less often those who had Sexuality Education in the school context started their sexual life at age 11 or earlier. Regarding the use of condoms and of the contraceptive pill at last sexual intercourse, although no statistically significant differences were found, there was an increase in the use of these, similarly to what was observed regarding sex associated with alcohol and drugs, which may suggest an increasing trend in those who had Sexuality Education since they present results which are systematically more preventive. Overall, adolescents who reported having had Sexuality Education classes in the school context in recent years have not shown less preventive behaviors; therefore, negative effects of Sexuality Education in the school context were not found.

These results sought to demonstrate the positive effects of Sexuality Education in school context, as well as its impacts on knowledge, attitudes and healthy sexual behavior among Portuguese adolescents.

In general, results suggest that Sexuality Education in school context promotes protective sexual behaviors, but there is still much to be done, because not all adolescents reported having these behaviors, which can bring major public health problems [23]. Moreover, although teenagers have focused on preventive behaviors, it seems that they have relegated knowledge and attitudes in general as their knowledge and attitudes are far from excellent (whether with or without Sexuality Education classes). This suggests that the Sexuality Education programs implemented in Portugal are still too limited to lectures, strongly homogenized in terms of content and, therefore, inadequate to raise the level of knowledge and attitudes, let alone to develop personal and social skills (of different target groups) as proposed by GTES (2007).

The findings of this study must be considered in light of the study's strengths and limitations. Both the HBSC and the other studies provide the ability to assess knowledge, attitudes and behaviors in students, teachers, parents and principals. Nevertheless, they relied on self-reported measures and recall bias. Another important limitation is that Sexuality Education has not been adopted by all schools so it is difficult to decide the moment from which it is possible to evaluate it.

Given the recent financial crisis the country is facing and the changes that the Ministry of Education has implemented in the schools (e.g., exclusion of Project Area of the national curriculum since the school year of 2011/2012) – which is already subsequent to the date of completion of these studies - it is assumed that the state of Health Education and Sexuality Education has suffered a setback since then. Moreover, Health Education and Sexuality Education are no longer considered priority. Therefore, a new evaluation is needed. Research shows that one cannot stop investing in areas that have presented successful results, taking the risk of having a reversal in terms of public health [9], including an increase in the percentage of young people with HIV/AIDS, more unwanted pregnancies, more abortions, and a less pleasurable Sexuality, among others. Making excellence a routine is an acceptable cost of development [7, 24], while abandoning or reducing investment represents an unacceptable cost [25].

**Table 4** Qualitative results for study 2: Teacher's and Parent's opinions regarding Health and Sexuality Education (Referred to by at least 50% of the participants).

| | According to teachers | According to parents |
|---|---|---|
| Teacher's involvement in Health Education and Sexuality Education and reasons | Weak involvement Reasons:<br>- not feeling prepared;<br>- feeling lack of specific knowledge;<br>- being afraid of not knowing how to answer (especially in sexuality);<br>- not feeling comfortable with the topic (especially in sexuality);<br>- being afraid of losing control of the class (especially in sexuality);<br>- being afraid of parents' reaction (especially in sexuality);<br>- inexistence of textbook to guide them through | Good involvement;<br>Reasons:<br>- having had training<br>- having easier access to both knowledge and resources;<br>- it's easier to address these topics within a group (the class) |
| Parents' involvement in Health Education and Sexuality Education and reasons | Weak involvement.<br>Reasons:<br>- lack of time;<br>- it's the school's duty;<br>- not feeling comfortable;<br>- not feeling prepared; | Weak involvement.<br>Reasons:<br>- not feeling comfortable;<br>- not feeling prepared;<br>- lack of time; |
| Difficult topics to address in Health Education and reasons | - Sexuality.<br>Reasons:<br>All those already referred above in Teachers' involvement section. | - Sexuality and STIs<br>Reasons:<br>Addressing these topics involves expressing inner feelings and intimacy. |
| Role played by the family and the school in Health Education and Sexuality Education | -Complementary role<br>Family is responsible for conveying values and models.<br>Family is adolescents' most important structure.<br>School is responsible for conveying knowledge and developing skills. | |

**Table 5** Study 3 - Differences between having/not having had sexuality education classes and student's sexual behavior, knowledge regarding HIV/AIDS transmission/prevention and attitudes towards people living with HIV.

| | Having had sexuality education classes (N=2048; 65.9%) | | Not having had sexuality education classes (N=1061; 34.1%) | | Total (N=3109) | | $\chi^2$ |
|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | |
| Ever had sexual intercourse[1] | | | | | | | 5.125* |
| Yes | 409 | **20** | 249 | **23.5** | 658 | **21.2** | |
| No | 1639 | **80** | 812 | **76.5** | 2451 | **78.8** | |
| Age of 1st sexual intercourse[2] | | | | | | | 5.021 |
| 11 or less | 20 | **5.0** | 23 | **9.4** | 43 | 6.7 | |
| 12 and 13 | 91 | 22.8 | 58 | 23.7 | 149 | 23.1 | |
| 14 and 15 | 230 | 57.6 | 132 | 53.9 | 362 | 56.2 | |
| 16 or more | 58 | 14.5 | 32 | 13.1 | 90 | 14.0 | |
| Contraceptive method used in last sexual intercourse[2] | | | | | | | |
| Condom | 317 | 96.1 | 176 | 93.1 | 493 | 95.0 | 2.181 |
| Pill | 110 | 53.9 | 52 | 50.0 | 162 | 52.6 | 0.425 |
| Having had sexual intercourse under the influence of alcohol or drugs[2] | | | | | | | 3.174 |
| Yes | 40 | 10.1 | 35 | 14.8 | 75 | 11.8 | |
| No | 358 | 89.9 | 202 | 85.2 | 560 | 88.2 | |
| | M | SD | M | SD | M | SD | |
| Knowledge scale[1] | **5.81** | 2.38 | **4.49** | 2.74 | 5.32 | 2.60 | 65.653*** |
| Attitude scale[1] | **13.18** | 2.10 | **12.28** | 2.35 | 12.84 | 2.24 | 47.103*** |

[1]Complete sample
[2]Sample: only those who reported having had their first sexual intercourse
* p<0.05; ** p<0.01; *** p<0.001
In bold – values that correspond to an adjusted residual ≥ |1.9|

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