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Perceptions of Portuguese teachers about sex education

ABSTRACT

OBJECTIVE: To assess perceptions and attitudes regarding sex education among middle and high school teachers in Portugal.

METHODS: A study comprising 371 middle and high school teachers, both female and male, was conducted in Portugal in February and March 2006. Data was collected through snowball technique. The questionnaire was made up of two parts: the first collected data on demographics, career, religious background and training and experience in sex education; the second part presented three measures related to sex education, one assessed attitudes, another importance given to sex education, and the third the grade at which respondents believed sex education topics should be taught. The analysis of differences between gender, trained and untrained teachers in sex education, and experienced and non-experienced teachers in teaching sex education was carried out using ANOVA.

RESULTS: Overall, teachers showed a fairly straightforward attitude towards sex education and assessed it as moderately/highly important. Body image was found to be the only topic that should be introduced in the 5th and 6th grades. Female teachers [$F(1;366)=7.772;p=.006$], trained teachers [$F(1;351)=8.030;p=.005$] and experienced teachers in teaching sex education [$F(1;356)=30.836;p=.000$] showed a more positive attitude towards sex education ($M=39.5; 40.4; 41.3$, respectively). Only trained teachers assessed its teaching as highly important [$F(1;351)=5.436;p=.020$]; and female teachers believed it should be introduced earlier [$F(1;370)=5.412;p=0.021$].

CONCLUSIONS: In general, teachers favor sex education in school. The fact that most topics of sex education are only taught in the 5th-6th or 7th-9th grades may have serious consequences since sex education has to be introduced before students engage in sexual behaviors.

DESCRIPTORS: Sex Education, manpower. Teaching. Curriculum. Health Knowledge, Attitudes, Practice.

INTRODUCTION

Sexuality arises from socialization everyone is exposed to, either formally or informally. It involves a learning process that begins with childhood, at home, and is accompanied by other agents of socialization such as friends, school, media and internet.^{13,17,18}

The family is the most significant agent of socialization, and studies^{9,15} have suggested that positive parental attitude towards sexuality, good relationship and perception of parental supervision all have an effect on children by delaying sexual initiation, improving contraception use and reducing unplanned pregnancy.

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According to the UN Population Report,⁵ today's generation of young people (15 to 24 years) is the largest in history. Additionally, there has been increasing rates of HIV infection among young people (about half of new cases), which can escalate a global concern of reproductive sexual health. Portugal ranks fifth among European countries with the highest HIV prevalence rates among those aged between 15 and 49 years (0.7% in men and 0.2% in women).

School is a privileged setting for formal, articulate sex education as children and adolescents spent a considerable amount of their time at school and other agents of sex education like the internet and other media can often provide non-structured education. First love experiences occur at school age, and school has human and material resources for providing education.¹⁶ Sex education at school also contributes to its promotion in the home environment.^a

Sex education programs have been shown to delay sexual initiation or increase condom use among those who are already sexually active.⁶

A recent Portuguese study¹² reported that nearly 90% of those surveyed said sex education at school was very important and 87% believed it should be mandatory.

Several authors^{1,8,15} argue teachers are the primary agents for successful sex education, teaching chiefly through their attitudes rather than by sharing their knowledge, especially on controversial issues such as sexuality.

Zapiain¹⁹ stresses the importance of training teachers because knowledge on sexuality is a prerequisite for successful sex education programs. Such knowledge can be acquired through basic training in education or specific in-service training. In Portugal, teachers are required to attend at least 25 hours yearly of specific in-service training. Training becomes even more relevant because, in accordance with the Portuguese Ministry of Education regulations,^b any teacher, regardless of their basic training, can teach sex education after receiving in-service training in sex education and under supervision.

Reis & Vilar¹¹ state that, like training, experience of teaching sex education at school is associated with the teacher's attitudes. Fisher et al⁴ explain that attitudes can be either more erotophilic or more erotophobic, i.e., more positive or more negative towards sexuality. Attitude is a major issue and authors have suggested there is an association between erotophilia and motiva-

tion to gain knowledge on sexuality, engaging in safe sex behaviors and belief that sex education at school promotes healthy and responsible choices. These attitudes⁴ are influenced by the level of consistency between sex education and the program to be implemented. In other words, the more positive the teachers' attitude towards sex education, the more importance they will give to it and more motivated they will be to gain knowledge and teach.

Since 1986, sex education has been mandatory in all grades of elementary and middle school. But schools have not conformed to this regulation due to lack of teachers with specific training or unavailability of a conceptual framework for sex education. A conceptual framework was published in 2000 but few schools got involved in its development.

The Portuguese Ministry of Education has presently^c developed guidelines for schools to provide sex education: 1) as part of a broader area, "Health Education;" 2) cross-sectionally by reformulating their curricula to include sex education contents and/or skills 3) at curriculum level, by selecting one of non-disciplinary curriculum areas of basic education; and 4) establishment of an office for providing support to high school students. Despite all these efforts, not all schools have complied with these guidelines and sex education is still being implemented.

Bearing in mind the teacher's key role in sex education, the objective of the present study was to assess perceptions and attitudes towards sex education of Portuguese middle and high school teachers.

METHODS

Middle and high school teachers, both females and males, were studied, using snowball sampling.^d This technique was adopted based on the fact that teachers are difficult to access as they spent a large amount of their time dealing with bureaucratic tasks, the sensitivity of the subject studied and greater assurance of anonymity due to less contact with investigators.

Teachers were informed on the study, and information confidentiality was assured. They were then asked to give their informed consent. The investigator distributed the first 16 questionnaires and then explained the sampling technique. Those who wanted to participate were told to collect information from their peers in the same proportion of men and women; and they in turn, if willing to participate, should proceed following

^a López F, Fuertes A. Para comprender a sexualidade. Lisboa: Associação para o Planeamento da Família; 1999.

^b Ministério da Educação. Grupo de Trabalho de Educação Sexual. Relatório Preliminar do Grupo de Trabalho de Educação Sexual. Lisboa; 2005 [cited 2005 Dec 5]. Available from: http://sitio.dgicd.min-edu.pt/saude/documents/relatorio_preliminar_es_31-10-2005.pdf

^c Ministério da Educação. Grupo de Trabalho de Educação Sexual. Relatório de progresso. Lisboa; 2007 [cited 2007 Jan 20]. Available from: http://sitio.dgicd.min-edu.pt/saude/documents/relatorio_progressogtes.pdf

^d Atkinson R, Flint J. Accessing hidden and hard-to-reach populations: snowball research strategies. *Soc Res Update* [Internet]. 2001 [cited 2006 Jan 6]; 33. Available from: <http://www.soc.surrey.ac.uk/sru/SRU33.html>

the same instructions. The number of questionnaires initially distributed to each teacher was different since each one could reach a certain number of subjects depending on the size of their school. The first teachers participating in the snowball sampling were both from rural and urban areas nationwide. To assure sampling effectiveness, an explanatory document was developed including instructions for questionnaire application. A total of 670 questionnaires were distributed during February and March 2006 and the response rate was 55.4%. Questionnaires with missing gender were excluded from the analysis.

The study questionnaire comprised two sections: the first section addressed sociodemographic data, professional description, religious beliefs, training and experience of sex education at school; the second section covered attitudes, importance assigned to 10 topics of sex education and school grade at which 26 topics of sex education should be taught.

A scale of attitudes was obtained from the “*Questionário de Atitudes dos Professores face à Educação Sexual*” (QAAPES – Questionnaire for Assessment of Teachers’ Attitudes towards Sex Education”, Reis & Vilar¹⁰). It comprises 10 items: 1. “Sex education at school is very important to children and adolescents;” 2. “Sex education at school encourages early sexual behaviors;” 3. “People learn about sexuality throughout their life experiences, not at school;” 4. “Only biology teachers are responsible for sex education;” 5. “Sex education should be a mandatory subject at school;” 6. “Sex education at school is an effective way of preventing AIDS;” 7. “Sex education at school is an effective way of preventing abortion;” 8. “It is up to the parents, not to school, to provide sex education to children and adolescents;” 9. “Today, given all information available in magazines and TV, sex education at school is hardly required;” and 10. “All teachers are responsible for sex education of their students”. All answers were recorded on a Likert-type scale: 1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree, and 5 – strongly agree. Cronbach’s alpha was 0.79.

To assess the importance teachers assign to certain topics of sex education at school, it was used a translation version of *Attitudes, Knowledge, and Comfort of Teachers in New Brunswick Schools* (AKCT – Cohen et al²). This scale consists of 10 items: “Terminology of genital organs,” “Puberty,” “Reproduction,” “Contraception and safe sex,” “Abstinence,” “Sexually transmitted infections (STI),” “Sexual abuse and harassment,” “Personal safety (prevention of sexual abuse),” “Pleasure and orgasm,” and “Decision making in love relationships”. Answers were recorded on a five-point scale: 1 – not at all important, 2 – somewhat important, 3 – important, 4 – very important, and 5 – extremely important. In the present study, Cronbach’s alpha was 0.82.

The scale assessing the grade at which teachers believe certain topics of sex education should be taught at school was translated and adapted from AKCT.² It comprises 26 items, nine of them are referred above except “Decision making in love relationships”; plus “Body image,” “Wet dreams,” “Menstrual period,” “Teenager pregnancy and parenting,” “Gender equity in a love relationship,” “Homosexuality,” “Attraction, love and intimacy,” “Communication about sexual relationship,” “Feeling comfortable with the opposite sex,” “Peer pressure for sex activity,” “Masturbation,” “Sexual behavior,” “Sex as part of a love relationship,” “Sexual problems and concerns,” “Sexuality and the media,” “Pornography,” and “Teenage prostitution”. Each item had five scores: 1 – elementary school; 2 – fifth-sixth grades; 3 – seventh-ninth grades; 4 – high school; and 5 – none. After the answer #5 was recoded as missing, the scores ranged between 26 and 104. Lower scores meant topics should be taught early at school. In the present study, Cronbach’s alpha was 0.91.

Both Canadian and Portuguese investigators authorized the use of their instruments, even in a condensed and adapted version. For the adaptation of the scale assessing school grade, differences between education systems were considered. The scale was adjusted to the Portuguese education system. Scales were translated by a language specialist in English and Portuguese. Before its application, the questionnaire was assessed by a panel of experts, by a specialist in sex education and pilot tested in a small sample of the population studied. Questionnaire administration took about 30 minutes.

Descriptive statistics were used to describe attitudes, importance assigned to sex education and school grade for teaching sex education. The scale on school grade was also used to assess the time point respondents thought certain topics should be taught.

Subjects were distributed in groups by gender, experience of teaching sex education at school and in-service training in sex education. The analysis of differences was performed using ANOVA for independent groups.

Statistical analyses were conducted using SPSS program, version 13.0.

The study was approved by the Institutional Review Board of Universidade Lusófona de Humanidades e Tecnologias de Lisboa.

RESULTS

The study sample comprised 371 teachers, of which 39.6% were males. Mean age was 39.1 years (SD=8.17). Most were Catholic (70.8%), married (53.1%) with children (63.1%) in relationships lasting on average 13.7 years (SD=8.47). Professionally, the majority of

Table 1. Sociodemographic and professional characteristics of middle and high school teachers. Portugal, 2006. N=371.

Variable	N	%	Mean	Standard deviation
Gender				
Male	147	39.6		
Female	224	60.4		
Age			39.1	8.167
Marital status				
Single	92	24.8		
Married	197	53.1		
Living with a partner	46	12.4		
Divorced	34	9.2		
Widowed	2	0.5		
Children				
Yes	233	63.1		
No	136	36.9		
Religion				
Catholic	262	70.8		
Protestant	5	1.4		
Jewish	1	0.3		
Muslim	7	1.9		
Buddhist	-	-		
None	93	25.1		
Other	2	0.5		
Love life				
No	70	18.9		
Yes	300	81.1		
Months (1–12)			6.7	2.452
Years			13.69	8.47
Education				
Bachelor's degree	30	8.1		
Graduate	291	78.4		
Post Graduate	21	5.7		
Master's degree	26	7		
Doctorate degree	1	0.3		
Other	2	0.5		
Years of teaching			14.23	8.13
Professional status				
School staff	216	58.9		
Pre-placement teachers	83	22.6		
Hired	68	18.5		
Subject group (by areas)				
Human Sciences	77	20.9		
Foreign Languages	64	17.4		
Nature Sciences	41	11.1		
Arts	47	12.8		
Religion	5	1.4		
Physical Education	35	9.5		
Other	99	26.9		
Training in sex education				
No	287	77.6		
Yes	83	22.4		
Experience of teaching sex education				
No	266	71.7		
Yes	105	28.3		

teachers was permanent staff (58.9%) having 14.2 years of experience (SD=8.13), from several different areas and had university degree (78.4%). Most (77.6%) did not receive any in-service training in sex education, and only 28.3% reported previous experience of teaching sex education at school (Table 1).

Overall, there was a positive attitude towards sex education at school. Teachers' opinions ranged between moderately positive in the positive items (e.g., "Sex education at school is very important for children and adolescents") and moderately negative in the negative items (e.g., "Sex education at school encourages early sexual behaviors"). The item "Only biology teachers are responsible for teaching sex education" was the single one subjects expressed a non-moderate opinion with a score of 1 ("strongly disagree") but they showed a positive attitude by recognizing that sex education is everyone's responsibility.

Statistically significant differences in attitude were found by gender, indicating that men had less positive attitudes towards sex education than women (mean=37.9; SD=5.98 in males; and mean=39.5; SD=4.9 in females; $F(1;366)=7.772$; $p=0.006$), and by training in sex education [$F(1;351)=8.030$; $p=0.005$]. The mean number of teachers who received training (40.4; SD=4.9) was greater than those who did not receive it (38.5; SD=5.5).

Statistically significant differences in attitudes concerning experience of teaching sex education at school [$F(1;356)=30.836$; $p=0.000$] were also found. Those with previous experiences showed more positive attitudes (41.3; SD=4.4) than those without any experience (37.9; SD=5.5).

Final scores of the scale of attitudes towards sex education ranged between 16 and 50. Teachers had a moderate/high (38.9; SD=5.41) attitude towards sex education (Table 2).

Importance was assigned to all topics, with a mean ranging between 3 (SD=1.16) and 4.6 (SD=0.65) in the items "Abstinence" and "STI", respectively.

There were no statistically significant differences in the importance assigned to general topics of sex education neither by gender [$F(1;351)=3.012$; $p=0.084$] nor by experience [$F(1;356)=3.468$; $p=0.063$] at $p \leq 0.05$. However, statistically significant differences were seen regarding in-service training [$F(1;351)=5.436$; $p=0.020$]. Those who received in-service training assigned higher importance (mean=40.7; SD=5.4) than those who did not receive it (mean=39.0; SD=5.6).

The final scores of the scale of importance assigned to general topics in sex education ranged between 24 and 50. Teachers assigned moderate/high importance to these topics (mean=38.4; SD=5.56) (Table 3).

Table 2. Scores in the scale of attitudes towards sex education by gender, training and experience in middle and high school teachers. Portugal, 2006.

Variable	N	Mean	Standard deviation	F
Gender	367			7.772*
Male	146	37.92	5.979	
Female	221	39.54	4.906	
Training in sex education	352			8.030*
Yes	79	40.41	4.881	
No	273	38.47	5.495	
Experience of teaching sex education	357			30.836**
Yes	100	41.34	4.377	
No	257	37.94	5.483	
Total (10 – 50)		38.89	5.412	

* $p \leq 0.01$

** $p \leq 0.001$

As for the school grade for teaching sex education, statistically significant differences were found by gender [$F(1;370)=5.412$; $p=0.021$]. Male teachers said sex education should be taught later in school (mean=68.8; SD=11.7) than female teachers (mean=65.7; SD=11.4). No differences were found regarding in-service training [$F(1;351)=1.243$; $p=0.266$] or experience of teaching sex education at school [$F(1;319)=3.427$; $p=0.065$] at $p \leq 0.05$.

Table 3. Scores in the scale of importance assigned to general topics of sex education by gender, training and experience in middle and high school teachers. Portugal, 2006.

Variable	N	Mean	Standard deviation	F
Gender	368			
Male	146	38.77	5.29	3.012ns
Female	222	39.81	5.71	
Training in sex education	352			5.436*
Yes	79	40.66	5.445	
No	273	39.02	5.56	
Experience of teaching sex education	354			3.468ns
Yes	102	40.26	5.304	
No	252	39.04	5.635	
Total (10 – 50)		38.39	5.561	

* $p \leq 0.05$

ns: non-significant

Table 4. Scores in the scale of school grades at which topics of sex education should be taught, by gender, training and experience in middle and high school teachers. Portugal, 2006.

Variable	N	Mean	Standard deviation	F
Gender	371			5.412 *
Male	147	68.78	11.73	
Female	224	65.73	11.383	
Training in sex education	352			1.243 ns
Yes	79	65.54	11.245	
No	273	67.29	11.669	
Experience of teaching sex education	320			3.427 ns
Yes	92	65.08	10.972	
No	228	67.72	11.787	
Total (26 – 104)		66.96	11.604	

* $p \leq 0.05$

The final score of the scale of school grade for teaching sex education ranged between 33 and 92, and teachers favored its introduction later in school (mean=67; SD=11.60) (Table 4).

Descriptive statistics were used to describe school grade and topics were arranged by levels (Table 5). “Body image” was the single topic that should be taught in elementary school, “Menstrual period,” “Puberty,” “Reproduction and birth,” “Personal safety,” “Terminology of genital organs,” and “Sexual abuse and harassment” should be taught in the fifth–sixth grades, and the other topics in the seventh–ninth grades. As for “STI/AIDS,” respondents either said it should be taught in fifth–sixth grades ($n=161$; 45.1%) or seventh–ninth grades ($N=167$, 46.8%). Although in general teachers supported the introduction of several topics of sex education at school, “Abstinence” (16.5%) and “Pornography” (15.3%) were singled out as topics to be excluded.

DISCUSSION

The results of the present study suggest most teachers are favorable to sex education at school, showing quite positive (moderate/high) attitudes or assigning high/moderate importance. Yet they think most topics should only be taught in the seventh–ninth grades, which reveals a weakly positive attitude towards sex education.

Studies have stressed the importance assigned to sex education as a key factor.^{2,11} Subjects were found to consider all topics important and half of them extremely

important (“Contraception and safe sex,” “STI,” “Sexual abuse and harassment,” “Personal safety,” and “Decision making in love relationships”). Among the topics considered very important were “Contraception and safe sex” and “STI”. These findings corroborate a Portuguese study conducted in a general population¹⁴ who pointed out these same topics as the most important in sex education.

As for the appropriate school grade for teaching the 26 selected topics, only “Body image” was considered appropriate for elementary school; the other 25 topics should be taught in fifth–sixth and seventh–ninth grades. Yet several authors^{2,11} underscore the importance of teaching sex education earlier at school before students engage in any sexual behavior.

A significant number of subjects proposed to exclude abstinence from the list of topics of sex education. This can be regarded as a cultural issue:³ the Portuguese people tend to adapt themselves and adopt an attitude of tolerance. In effect, in Portugal, sex education supporting abstinence or any other religious belief has never been advocated neither by experts^{19,a} nor by the general public.¹² It is thus understood that it should not be promoted any sexual behavior – either abstinence or other – but rather free, informed, individual choices.¹⁴

Increasing rates of HIV infection and unplanned pregnancy among young people may explain the importance teachers assign to “STI/AIDS” and “Contraception and safe sex”. In the present study, teachers assigned a moderate/high importance to topics related to the prevention of HIV and STI and unplanned pregnancy. However, they disagree about the appropriate grade for teaching “STI/AIDS,” either fifth–sixth or seventh–ninth grades. Most said “Contraception and safe sex” should be taught in the seventh–ninth grades but by then some adolescents have already had their sexual initiation. One should also bear in mind that sexual initiation is now occurring at earlier ages.

The analysis of differences between genders revealed that women seem to take a more positive attitude and favor teaching selected topics earlier at school. This finding disagrees with that reported by Cohen et al² that men have a more positive attitude. This disagreement may be explained by the fact that, in Cohen et al² study, their sample included non-Portuguese elementary and middle school teachers and only 26% were women. In contrast, the present study sample comprised middle and high school teachers of which nearly 60% were women.

In regard to teachers’ training, those who received training showed more positive attitudes and assigned higher importance to sex education.

^a Ministério da Educação. Grupo de Trabalho de Educação Sexual. Relatório Preliminar do Grupo de Trabalho de Educação Sexual. Lisboa; 2005 [cited 2005 Dec 5]. Available from: http://sitio.dgicd.min-edu.pt/saude/documents/relatorio_preliminar_es_31-10-2005.pdf

Table 5. School grades at which sex education topics should be taught reported by middle and high school teachers. Portugal, 2006. (N=371)

Variable	School grade									
	Elementary school		Fifth-sixth grade		Seventh-ninth grade		High school		None	
	N	%	N	%	N	%	N	%	N	%
Body image	169	47.9	112	31.7	60	17	11	3.1	1	0.3
Menstrual period	34	9.5	247	69	69	19.3	6	1.7	2	0.6
Puberty	9	2.5	207	57.7	137	38.2	6	1.7	-	-
Reproduction and birth	82	23	154	43.1	108	30.3	13	3.6	-	-
Personal safety	61	17.1	149	41.7	128	35.9	18	5	1	0.3
Terminology of genital organ	104	29.3	148	41.7	81	22.8	20	5.6	2	0.6
Abuse and sexual harassment	56	15.9	135	38.2	131	37.1	30	8.5	1	0.3
Contraception and safe sex	9	2.5	94	26.3	228	63.7	23	6.4	4	1.1
Sex as part of a love relationship	15	4.2	56	15.6	202	56.3	81	22.6	5	1.4
Teenager pregnancy and parenting	7	1.9	129	35.9	201	56	22	6.1	-	-
Masturbation	5	1.4	94	26.2	199	55.4	48	13.4	13	3.6
Peer pressure for sex activity	6	1.7	91	25.5	195	54.6	57	16	8	2.2
Sexual problems and concerns	6	1.7	59	16.6	194	54.5	94	26.4	3	0.8
Sexual behavior (kisses, intercourse)	16	4.5	91	25.6	186	52.2	54	15.2	9	2.5
Wet dreams	10	2.8	117	33.1	177	50	31	8.8	19	5.4
Abstinence	9	2.6	61	17.3	175	49.7	49	13.9	58	16.5
Sexuality and the media	6	1.7	63	17.6	176	49.3	101	28.3	11	3.1
Homosexuality	21	5.9	86	24	176	49.2	63	17.6	12	3.4
Communication about sexual relationship	24	6.8	74	20.8	174	49	72	20.3	11	3.1
Gender equity in a love relationship	40	11.2	85	23.9	174	48.9	47	13.2	10	2.8
Teenage prostitution	5	1.4	51	14.3	174	48.9	99	27.8	27	7.6
Attraction, love and intimacy	28	7.8	94	26.3	173	48.3	56	15.6	7	2
Pleasure and orgasm	3	0.8	40	11.1	173	48.2	117	32.6	26	7.2
STI/AIDS	18	5	161	45.1	167	46.8	10	2.8	1	0.3
Comfortable with the other sex	52	14.6	87	24.4	150	42	55	15.4	13	3.6
Pornography	6	1.7	55	15.3	143	39.7	101	28.1	55	15.3

STI: sexually transmitted infection

Although the Portuguese legislation^a made sex education mandatory at school few years ago, the results of the present study indicate this law has not been widely put into effect. This may explain why 77.6% of the study subjects have not received any sex education training in spite of it being offered at extension schools. This finding is consistent with, though more pronounced, international (65%²) and Portuguese (67%⁷) studies.

With respect to experience, teachers who have developed previous sex education activities had more positive attitudes.

One of the limitations of snowball sampling is the selection of a convenience sample. It is possible that

there were selected to the study subjects with a positive attitude towards sex education, biasing the results.

Like other studies, the present study assessed teachers' perceptions of their attitudes and the importance they assign to sex education but not constructs per se and results may have been affected by subjects' subjective assessments. In regard to school grades at which certain topics of sex education should be taught, it should be noted the hypothetical nature of the options available since sex education has not yet been widely implemented in Portuguese schools.

Another limitation of the study is regarding the sample size which was not very significant for the universe of subjects, weakening result generalization.

^a Portugal. Lei nº 3/84, de 24 de março de 1984. Educação Sexual e Planeamento Familiar. D.R. n.º 71 – I. 24 mar 1984. p.981-3.

The study results suggest that attitudes can be changed through in-service training and involvement in teaching activities of sex education at school. Therefore bearing in mind attitudes are key to the teaching-learning process, particularly to the development of adolescents' skills, they should be prioritized. Additionally, in-service training can help teachers acquire the skills needed to deal with their difficulties regarding sexuality. In reality, even the basic training they receive seems to excessively simplify the multiplicity of areas of human knowledge involving sex education, which

reinforces the need for in-service training. A panel of experts^{a,b} has been appointed by the Portuguese Ministry of Education to propose actions to scale up the implementation of sex education at school and in-service training is one of the actions identified. It is expected that, once the recommendations are followed, teachers will be better trained and their attitudes towards sex education and the importance assigned to it would be much more positive, which would allow them to play a proactive and crucial role in further developing sex education in Portugal.

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