


Research on Sex Education at Different Levels of Education Curricular, Social and Ethical Contexts

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Received: 26.01.2012

Revised: 28.04.2012

Accepted: 29.05.2012

The original language of the article is English (v.9, n.4, December 2012, pp.35-43)

ABSTRACT

The aim of research was to define the determinants of changes in approach to the sex education in the last 50 years, identify the teaching methods of human sexuality in 1960-2010, define the link between teaching biology and the concepts of human sexuality. The analysis of 135 articles was carried out in order to define the significance of issues concerning human health and hygiene at primary school level, as well as analyze biology and hygiene syllabi in 1960-2010. The articles related to the sex education, ethical problems and the issues of AIDS and HIV taught during science classes at primary schools as well as biology at lower secondary and secondary schools. The results of the research confirmed the research hypothesis and were discussed on the basis of subject and methodical literature. They will allow to determine educational needs in the scope of human sexuality and elaborate teaching model of human biology in relation to genders at different levels of education.

Key Words: Sex Education; Biology Curricula; Ethics; Knowledge-Based Society.

INTRODUCTION

The tasks of the contemporary education are connected with the general education core curriculum, syllabi and education standards. It is clear that new tendencies of approach to school and social knowledge appear. Education assumes, among others, the following objectives: shaping the attitude of responsibility for one's own and others health, as well as boosting the understanding of the relationship between a human being and environment (Potyrała, 2011). Health education is a very important school's objective which is understood as a process based on scientific principles that offers the opportunity of learning and taking conscious decisions concerning health. Family, the educational system and society are responsible for this process (Potyrała & Walosik, 2007). Health education concerns, among others, HIV and AIDS which cause pandemic that spreads at an alarming pace. School is a 'key place' where children should be taught about the above mentioned issue.

However, the efficiency of such actions depends on how quickly this information reaches students, shaping their positive attitudes to health, as well as avoiding risky behaviors. School has many resources at its disposal to educate efficiently: qualified staff, interactive teaching methods, various materials and teaching methods, as well as the opportunity of



engaging parents in teaching children (Schenker & Nyirenda, 2002). Health education embraces also bioethical issues. According to Katolo (1997) three groups of bioethical issues can be distinguished: /1/ the ones that are the result of traditional ethics in the scope of medicine, i.e. abortion, euthanasia, contraception, sterilization; /2/ the ones resulting from the latest developments in biomedicine technology: 'in vitro' fertilization, manipulation of genetic code, prenatal diagnosis, organ transplantation; /3/ the ones based on premise that health and life depend on non-medical factors such as: behaviours and health politics. As a result, the last group includes drug addiction, alcoholism and AIDS. In biological education contents appear issues concerning all above mentioned groups.

The theoretical purpose of the research was to determine the determinants of changes in approach to the sex education in the last 50 years. Cognitive objectives were focused on: the identification of teaching methods of human sexuality issues in 1960-2010, the determination of relationship between teaching of biology and human sexuality issues, the examination of relationship between bioethical issues, AIDS/HIV and teaching sexuality issues. The practical research objective was to determine educational needs in the scope of human sexuality with reference to planned models of teaching.

The following research problem was formulated: What were the directions of changes in sex education in the context of the official biological education in Polish schools during the last 50 years?

Detailed problems:

1. What content concerning bioethical issues appears in science and biology curricula and subject-didactic literature?
2. What is the scope of AIDS and HIV issues that are included in science and biology curricula and scientific articles?
3. What is the thematic scope of human health and hygiene issues.

The main hypothesis: The direction of changes in the sex education oscillated toward deepening the concepts of human biology with the emphasis on reproductive biology, prenatal development, diagnosis of threats related to sexually transmitted diseases, however, with the exclusion of behavioral aspects and prevention.

The detailed hypotheses:

1. The bioethical problems are raised at each level of education; each concept is discussed to a sufficient extent.
2. The concepts of AIDS and HIV in regard to human health and biology are touched upon at all levels of education to an adequate extent.
3. Health and hygiene education at primary school level is focused on both disease diagnosis and effects of inadequate health behaviors, as well as showing safe behaviors conducive to health.

The following research methods were adopted to verify research hypotheses: an analysis of documents (syllabi, core curriculum, subject-methodological literature) using the guide of documents analysis, that was prepared by the author, and the diagnostic poll.

METHODOLOGY

The analysis of the articles from the scientific-didactic journal '*Biology at school*', that has been published in Poland since 1944, was carried out. The quarterly included only the materials consistent with a valid curriculum in respective time periods. Hence the articles reflect the curricular tendencies and curriculum changes. Semantic and methodological content of 135 articles concerning the sex education was examined. Furthermore, the articles were divided into scientific and didactic (lesson plans) ones. The analysis was performed in regard to: the general education core curriculum (MEN, 2009), 5 science curricula at the primary school and 5 biology curricula at the lower secondary school, as well as 8 at the

secondary school. The analysis embraced also textbooks and exercise books: 4 of science subject, 13 for biology at the lower secondary school and 11 for biology at the secondary school. The research conception, which is graphically presented (picture 1), indicates the sequence of actions, the relationships between variables, as well as the theoretical and practical development of research.

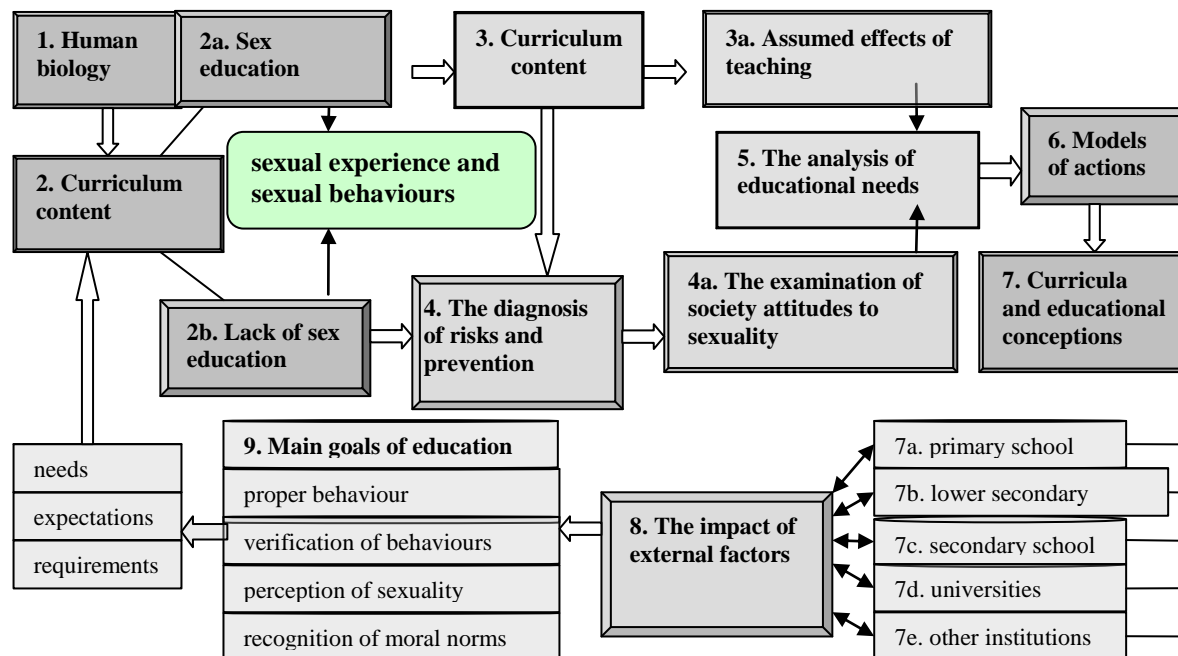


Figure 1. Research conception based on the analysis of documents and the scale of attitudes.

The diagram concerns the wider research project, but in this article, we want to present one of stages' results of this project. It was the analysis of the Polish journal "The Biology at school". The analysis method was analysis of documents based on the guide elaborated on needs for research by one of authors of the article.

Content of Polish Education System

Since changes made in 2009 Education in Poland starts at the age of five or six for the 0 class (Kindergarten) and six or seven years in the 1st class of primary school. It is compulsory that children do one year of formal education before entering 1st class at no later than 7 years of age. At the end of 6th class when the students are 13, they take a compulsory exam that will determine to which lower secondary school (gimnazjum, pronounced gheem-nah-sium) (Middle School/Junior High) they will be accepted. They will attend this school for three years for classes, 7, 8, and 9. They then take another compulsory exam to determine the upper secondary level school they will attend. There are several alternatives, the most common being the three years in a liceum or four years in a technikum. Both end with a maturity examination (quite similar to French baccalauréat), and may be followed by several forms of upper education, leading to licencjat or inżynier (the Polish Bologna Process first cycle qualification), magister (the Polish Bologna Process second cycle qualification) and eventually doktor (the Polish Bologna Process third cycle qualification).

FINDINGS AND DISCUSSION

Table 1 depicts the number of articles and lesson plans regarding the sex education concepts and human biology. A particular consideration was given to the contents relating to sexuality issues in the successive decades.

Table 1. *The number of articles and lesson plans relating to sex education concepts.*

Content	The number of scientific articles	The number of lesson plans
AIDS, sexually transmitted diseases	6	14
Genetic studies	9	2
Home, family	1	2
Sex education	6	16
Hygiene	4	1
Reports of conferences on human biology	4	-
Syllabi, curriculum reform, core curriculum	33	-
Education in: USA, the United Kingdom of Great Britain, the Soviet Union, Norway	6	-
Reproduction, growth	14	11
Health	4	2
Total	87	48
		135

In the last 50 years numerous primary and secondary curriculum reforms were designed. Each reform assumed extending biology syllabi in relation to human science and sexuality. This included sexual reproduction, embryogenesis, conscious parenthood, personal and reproduction hygiene, sexual disorders, dangers of puberty, sexually transmitted diseases. Furthermore, the issues of sexual drive, sexual deviations, consequences of unexpected pregnancy, birth control methods, prevention of HIV infection, were introduced (Stawiński, 1963; Doboszyńska, 1966; Instytut Programów Szkolnych, 1976; Instytut Programów Szkolnych, 1985; Cichy, 1997). Lessons plans designed in the space of years encompassed all aforesaid topics (Janczewska, 1976; Lach-Długołęcka, 1998); moreover, the materials published in the recent years related to both biological research achievements, as well as moral and medical aspects of obtaining stem cells (Adamsky, 2005).

Didactic resources were considered to be particularly useful in the sex education, e.g. charts and teacher's drawing were adopted for presenting anatomy, physiology of reproductive system; videos and charts were used for discussing the subject of pregnancy, embryogenesis and prenatal development. Furthermore, the subject of hygiene and nurture of infants and children was aided by slides, and sexually transmitted diseases were discussed with the help of models illustrating symptoms of particular diseases.

Educational tours were of great importance in the sex education too. These were organized to places such as premarital counseling centres, mother and child centres, sexually transmitted diseases centres, mental health centres and hospitals.

A teacher not only transmits knowledge about the anatomy, physiology, reproductive system but shapes students' attitude toward sexuality, morality, ethics and proper behavior. Some teachers introduced mentioned topics into their classes long time ago because students showed great interest in them.

The Detailed Hypothesis

Teachers encounter numerous ethical issues while implementing given curricular contents. These are the issues of /1/ racial segregation, /2/ transplantation, euthanasia, /3/ code of ethics for healthcare workers, /4/ political demography setting the limit on the number of children, /5/ hormonal regulation, e.g. hormones for athletic enhancement /6/ animal testing, /7/ termination of pregnancy, /8/ 'test-tube babies' (Flis, 1997). The issue of embryology is touched upon in numerous curricula and textbooks at the different levels of education. As a result, ethical questions of artificial insemination arose, especially those concerning

establishment of parentage, siblings in a case of several hundreds of clones, the concept of biological or genetic mother, the frozen embryos ethics (Kołątaj & Wojciechowska-Kołątaj, 1988). Numerous lesson plans pertaining aforesaid issues were designed. One of them (Adamsky, 2005) assumed shaping proper attitudes among students towards cloning, using embryos for research and transplantation purposes, learning about stem cells location in a body, revising stages of embryonic development. The aim of another lesson plan (BioEducation Foundation, 2006) was to explain students the ethical issues concerning antenatal examination and in vitro fertilization. Many well-known scholars considered in vitro to be infanticide for its high rate of failures. Nonetheless, it cannot be stated that external fertilization in mammals results in physique and functioning defects among the progeny (Kołątaj, 1991). Unfortunately, it is difficult to discuss and present aforesaid topics to students for even respected scholars in the field do not take an unanimous position on that matter; what is more, the opinions and convictions within the society are divided.

Numerous controversies arose in relation to the sex education of children and teenagers. According to ONZ and WHO school is responsible for: /1/ shaping a proper attitude towards sexuality, eroticism and tolerance, /2/ teaching about venereal diseases, violence, sexual abuse and sexual pathology, /3/ promoting tolerance for homosexuals, /4/ teaching about the significance and consequences of beginning the sex life. Although teachers are not aware of it, students from each grade experience something that make them more interested in certain subject, e.g. early pregnancy, sexual contact with a person infected with HIV, drugs, alcohol, adoption, divorce, sexual violence, homosexuality, abortion. The teacher should be open to students' topic proposals as in this way his/her educational work, both in sense of knowledge conveying and shaping attitudes, will be effective (Lew-Starowicz & Lach-Długolecka, 1998).

The Detailed Hypothesis 2, 3 - Verification

The new general education core curriculum (2009) assumes incorporating more contents of prevention and health promotion. Furthermore, it raises the status of health education making it an important subject at all levels of education (Potyrała & Walosik, 2007). Biology curriculum at primary school level encompasses the issues of human health and hygiene (Table 2).

Table 2. *Health and hygiene issues in the core curriculum* (MEN, 2009).

PRIMARY SCHOOL	Selected core curriculum content
	<ul style="list-style-type: none"> - the influence of daily behaviours at home and school on environment - principles of taking care of one's own body (skin-, hair-, teeth-, nails- and clothes- hygiene) - first aid rules - negative effects of alcohol, nicotine and psychoactive substances consumption on health - factors affecting positive or negative mood at school or at home - significance of rest, nourishment and exercises for proper body functioning - rules of effective learning, creating learning space for primary school students - rules of safe food handling, rules of good nutrition - health benefits of physical activity, rules of a healthy lifestyle, - ideas for spending free time in a productive way, road safety rules

The research of the Polish Academy of Sciences revealed that society did not possess the elementary knowledge about health. Partially responsible for this situation were the authors of curricula and teachers (Szarski, 1983). It was claimed that the knowledge of the following issues should be conveyed to students: lack of casual sex, sex culture, risks arising from the development of civilization – AIDS, feeling of mutual moral responsibility of healthy and sick people, the right attitude towards people belonging to risk groups,

prophylaxis – life hygiene, cooperation with health care services, the role of the media in promoting health culture in society (Rowiński & Grzechnik, 1988; Juśkiewicz, 1995). It was essential to provide a proper training for teachers who were to present the issues of AIDS in relation to medicine and morality; moreover, it was important to organize meetings with AIDS, drug addiction and prostitution specialists. At secondary schools it was necessary to put more emphasis on the risk of infection through sexual contacts as it was clear that some students had already homosexual contact, practiced prostitution or used drugs (Pytlak, 1990). Over the last 30 years numerous lesson plans on AIDS were designed. It was assumed (Golc, 1988) that a student should know such issues as: the significance, causes and the prevalence rate of AIDS. In addition, he/she should learn both how the immune system works and how it is affected by HIV, as well as methods of reducing the risk of infection, ethical and moral problems concerning AIDS. The aim was also (Otręba, 2002) to discuss the problems of infected people, indicate the right reactions to them, explain the implication of AIDS in society; discuss the risk situations and ways of engaging in supportive work to help infected people, as well as to explain misunderstandings surrounding AIDS. Teachers, educators, school nurses were required to shape health-promoting behaviours among students and the youth. A school should influence not only children but whole families as well (Feszczyn, 1989). In the years 1992-1995 the project 'A school promoting health' was launched in Poland, the program was based on the premise that a school took actions designed to help individuals and communities improve their health.

Alcohol is the most frequently used psychoactive substance by students in Poland. The second and third in this ranking are tobacco and marihuana with hashish respectively. Quite often students use psychoactive drugs too. Therefore, one organizes the School Prevention Programs (SPP) in which not only students but teachers and parents are engaged as well. The purpose of this action is reflected in developing positive behaviours through which a young person becomes more resistant to risks and threats of the contemporary world (Woynarowska, 2007). Since long time ago one organizes health and health prevention competitions in Polish schools. Moreover, the media campaigns for health promotion are organized; these include, e.g. 'Drink milk! You will be great!', 'Mum, dad I prefer water', 'The Great Orchestra of Christmas Charity', 'Earth Day', 'Clean Up the World'.

General Knowledge Claims for the Studies Under Investigation

Sex education should be obligatory, unfortunately in Poland the subject is not seriously treated (Pezda, 2011). If it was not for the superstitions concerning the reproduction that existed through the years, these topics could have been freely discussed. However, they were exaggerated and consequently aroused negative associations. As a result, it was reasonable to incorporate the sex education for the youth into the curriculum (Męczkowska, 1948). The reasons for introducing the sex education to schools included among others: the acceleration of development, too early beginning of the sex life among the youth and the lack of conversations about sex at home. The youth should understand the issues of sexuality, realize the role of sex in life and the necessity of control over one's sexual drive (Janczewska, 1976). Nevertheless, teachers admit that they are anxious about discussing these topics. This situation must be changed because it is harmful to young people. A teacher should not only convey biological information but shape students' good attitude toward sexuality as well (Męczkowska, 1948; Pilarski & Stępczak, 1980). What is more, the youth is interested in sex education lessons and opts for such subject at the school (Izdebski, 1997). The students' interest in sexuality issues is confirmed by the research conducted during the school year of 1971/1972 among 152 secondary school students. Students anonymously asked questions on issues such as: the sexual act (67%), sexual deviations (16%), masturbation (5%), sexually transmitted diseases (4%), morals and lifestyles in other countries (3%), anatomy and

physiology of reproductive system (1%) (Bobrzyńska, 1973a). Health education should be based on health protection through conscious monitoring of the learning process and managing a student's behaviour. Educational activities should be centred on the following objectives: popularization and enrichment of student's knowledge about health, advising in relation to health risks, shaping appropriate attitudes towards hygiene rules, prevention and curing of diseases, stimulating the interest in health issues through regular enriching the knowledge about one's own body and its hygiene (Potyrała, Walosik, 2007).

At the beginning of the 1980s, for the first time, the cases of AIDS were described. In the media then a lot of information appeared on this topic, people feared of quickly spreading AIDS epidemic that was called 'The plague of the 20th century'. Although, it was expected that people would become more cautious, it was not the case. Therefore, it is necessary to organize preventive actions for communities. Unfortunately, the issues of human sexuality and sex are not willingly presented in Polish schools. Only some teachers and parents are adequately prepared to have conversations and classes with the youth about sexuality. There are actions such as the World AIDS Day, nevertheless, aforesaid topics are avoided (Helizanowicz, 2001). Teaching about HIV/AIDS is not efficient when it is accompanied by the atmosphere of fear and insecurity. On the one hand, children receive the information inherently connected with the local cultural norms and values; on the other hand, they reach the information in the media. It is extremely important that they knew how to differentiate between them. Teaching about HIV and AIDS does not accelerate sexual initiation or increase the frequency of sexual intercourse and the number of partners. On the contrary, it helps young people to maintain sexual abstinence for a long time, diminish the number of sexual partners and it may increase condom or other contraceptives use (Schenker & Nyirenda, 2002). The school has obligation to organize preventative actions which should be a part of educational process (Helizanowicz, 2001).

50% of health determinants is dependent on environmental factors: natural, anthropogenic, social economic ones (health care system, the media, cultural models), education level (the level of health culture, family life, social ties), health promoting and anti-health behaviours (personal hygiene, sexual behaviors, stimulants). Health promotion is an educational, economic and environmental activity (Kirschner, 1997). It is important to develop adequate students' attitude towards implementation of various projects on biology lessons, e.g. health promotion projects. It will allow to increase the level of students creativity and therefore, develop their critical thinking skills. Furthermore, they will be able to express their ethical feelings and ask questions about topics that they do not fully understand. As a result, students' awareness of natural science issues will increase (Potyrała & Walosik, 2008).

In the contemporary curricula at all levels of education the significance of human health issues and the impact of different factors on human body is emphasized. Health education should shape positive habits in relation to protection of physical, psychological and social health. What is more, it should also influence shaping of health promoting attitudes in regard to application of hygiene and prophylaxis rules (Potyrała, Walosik & Kuczek, 2007).

CONCLUSIONS

It is clear that the introduction of the aforesaid topics into the curriculum was difficult. Every time when a new curriculum was introduced or the curriculum reform was conducted, the biology content was expanded. The current lower secondary school core curriculum puts emphasis on human biology. Although the Polish society tends to be more open to 'embarrassing issues', which can be seen as they are incorporated into the curriculum, still rather prudish approach to the sex education prevails in Poland. Parents do not know how to talk with their children about sex and consider that the school is responsible for it. Yet

teachers avoid teaching about sexuality issues and admit that they feel ashamed of presenting them. This is the result of the fact that the issues of sexual contacts used to be associated with risks. The phenomenon of diseases prevention was not known; furthermore, students were not taught that sexual contacts could actually be safe. The emphasis was always put on the responsibility for sex life – numerous lesson plans embraced the topics of the structure and functioning of the reproductive system, adolescence, pregnancy, marriage and family. Furthermore, the topics of contraceptives, AIDS and sexually transmitted diseases were incorporated to lesson plans as well.

As a matter of fact, formerly just few articles included information about sexually transmitted diseases. The analysis of syllabi, core curriculum and subject-methodological literature indicated that the issues of bioethics, AIDS and HIV are discussed at all levels of education. The primary core curriculum assumes considerably less of aforesaid topics and they relate primarily to general concepts of sexually transmitted diseases. On the other hand, the lower secondary and secondary curriculum embraces relatively expanded contents of bioethics, AIDS and HIV. However, the degree of the curriculum content implementation depends to a large extent on teachers' attitudes towards the issues to be presented. The mentioned issues appear in different sections of the curriculum, e.g. in those relating to human reproduction, genetics, health and diseases. There is a relationship between bioethical problems, AIDS/HIV and the sex education of children and the youth for a large number of moral questions is associated with human sexuality and human intimate contacts. This refers to the contraception, sexual initiation, AIDS, abortion or in vitro fertilization. The approach to the upbringing and educational content has changed. This tendency is very positive and the shift of the society attitudes should be reflected in the system of education. Since the majority of publications concerns only AIDS, adolescence and genetic research, a thorough revision of curricula is necessary. Furthermore, the change should take into consideration the youth's needs, the pace of social changes and the media development.

Footnotes

1. MEN – Ministry of National Education in Poland
2. Primary school – school for students aged 7 – 12
3. Lower secondary school – (Polish: gimnazjum) ages 13 – 15
4. Secondary school – (Polish: liceum) school for students aged 16 – 18

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