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Knowledge of contraception among high school and university students in West Pomerania voivodeship

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Abstract

Adolescents and young adults are the most vulnerable group of unplanned pregnancy, which may result in early motherhood or often unsafe, illegal abortion. The teenager birth rate in Poland (total number of live births per 1000) is one of the highest in European Union and the West Pomerania voivodeship has the highest teenager birth rate in Poland. Low level of contraceptive use, choosing low efficacy methods and errors resulting from inadequate knowledge are considered the main reasons of unplanned pregnancies. In this study we aimed to assess the knowledge of high school and academic students of the West Pomeranian vivodeship about contraception. We recruited 500 students who were asked to fill in an anonymous questionnaire checking knowledge, beliefs and experiences regarding the use of contraception. 277 of the participants were using contraceptive methods. Our results showed that the knowledge about pregnancy prevention is insufficient and young people choose methods that are ineffective. The feeling of shame and the need to visit a doctor and undergo a gynecological examination to get a prescription are thought to be the main limitation in accessibility to contraceptive methods in the studied group. Since most of the respondents indicate the internet as the main source of their knowledge, it seems reasonable to create a professional website addressed to teenagers and young adults, introducing the subject of contraception.

Key words: adolescents, contraception, knowledge, pregnancy

Introduction

Today adolescents begin their sexual activity earlier and more often engage in premarital relationships [1]. Considering the fact that menarche occurs gradually earlier and the education period lasts longer, the time between sexual maturity and readiness to start a family elongates [2]. This is associated with an increased risk of both unplanned pregnancy and sexually transmitted diseases [1]. Unwanted teen pregnancy results in abortion or early parenthood affecting the education and resulting in poverty, social isolation, as well as emotional issues, both in young mothers and their children [3]. In Poland, except for pregnancy resulting from rape, severe fetal defects, or life-threatening condition of the mother, termination of pregnancy is illegal [4]. Illegal abortions, often performed without proper precautions, are responsible for about 13% of global pregnancy-associated mortality [2].

According to the report published in 2015 by the Mother and Child Institute, as much as 17.4% of 15-year-old adolescents have already undergone sexual initiation. The World Health Organization (WHO) estimated that the average age of sexual initiation in young Poles amounts to 17.9 years, which is one of the highest in Europe. Despite all this, the fertility rate in Polish teenagers estimated as the number of births per 1,000 girls, amounts to 14.5 [6] and is higher than in most EU countries [7]. There is also a significant diversity of teenage fertility depending on the region of Poland. The West Pomerania voivodeship is characterized by the highest teenage fertility rate, both in cities and in rural areas, amounting to 17.3 in total. In comparison, in the Małopolskie, Podkarpackie and Świętokrzyskie voivodeships it does not exceed 10 [6].

The results of the survey carried out by the Center for Public Opinion Research (PL: CBOS) show that contraception is widely accepted in Poland. As much as 80% of respondents accept the use of condoms and 64% the use of hormonal contraception [8]. Among adolescents and young adults, the acceptance of hormonal contraception was even higher and amounted to 82% and 88% respectively [9]. However, only 57.3% of the surveyed Polish 18-year-olds after sexual initiation claimed that they always use contraception during sexual intercourse

[1], and as much as 40.2% of 15-year-olds did not use a condom during the last intercourse [5]. Another reason that could account for about 50-65% of unplanned pregnancies involves failed contraception [10]. The effectiveness of oral hormonal contraception in girls and young women is even 10 times lower in comparison to adult women, which results mostly from mistakes in its use. It was estimated that 47% of teenagers skip one or more birth control pills during a single menstruation cycle and 22%, two or more. Furthermore, a significant number of teenagers decide to use very ineffective methods, such as coitus interruptus (22%), and natural methods (13%) [1]. According to the recommendations of the Polish Society of Gynecologists and Obstetrics (PL: PTGiP), natural contraceptive methods are recommended only for a small group of women, i.e. those with contraindications, personal aversion or moral reasons excluding other forms of contraception and who are ready to accept pregnancy, when it occurs [11]. The WHO points out that all contraception methods used by adults are also safe for adolescents. It is especially recommended to use a double contraception which includes combined oral contraceptive pill and condom as a prophylaxis of sexually-transmitted diseases, in girls who frequently have sex, or condom with emergency postcoital contraception, if the condom breaks or slips, in girls who do not have sex on regular basis. Because of frequent mistakes regarding the use of oral contraception pills, WHO recommends transdermal or intravaginal systems, which are more effective in this group [12]. However, according to the research carried out by Phillip et al. in a group of 442 teenage girls aged between 15 and 19 years, who have already started sexual activity, only 11-29% used hormonal contraception, 45-52% used condoms, and 20% did not use any birth control method. As much as 73-84% of teenage girls were well informed about postcoital contraception [13].

The aim of this work is to analyze the level of knowledge about contraception and its application among high-school and college students in the West Pomerania voivodeship.

Materials and methods

The study was carried out between 2016 and 2017 among 500 secondary school and college students including 262 high-school students, 106 technical school students, and 132 college students. As much as 59% of them (293 individuals) were women and 41% (207 individuals) were men. The test group was subdivided into younger students (≤ 19 years) - 349 respondents and older ones (> 19 years) - 135 respondents. Sixteen people refused to specify their age in

the survey. Participation in the research was voluntary and anonymous. The evaluated teenagers were informed that the obtained data will be used only for scientific purposes.

The questionnaire elaborated by the authors consisting of 28 single-choice or multiple-choice questions was used as a research tool. The questions checked the knowledge, beliefs and experience regarding contraception (Tab. 1-4) and included 8 questions about age, sex, origin, education and physical activity. The answers to the questions regarding the theoretical basis were evaluated in terms of their correctness in the context of other variables. The knowledge on contraception was graded as high, when the result ranged from 8 to 10 points, average 5 to 7 points and poor 0 to 4 points.

Results

As many as 277 individuals answered yes to the question "do you use any form of contraception" which constitutes 55.4% of all respondents. Among them, 153 women used contraception (52.22% of evaluated women) and 124 men (59.9% of the evaluated men). In the younger group 179 individuals (51.28%) used contraception, and 92 were in the older group (68.15%).

A total of 313 respondents have already had sexual experience (200 in the younger group and 113 in the older group). As much as 59% of the surveyed girls and 67% of boys already had sexual initiation at the average age of 17.3 years (range 13-23 years) and 16.9 years (range 12-23 years), respectively. Sexual initiation at the age below 17 years was common in teenagers living in the cities of above 100000 inhabitants, and adolescents who were active in sports at professional level were the first to start having sex.

Among 187 respondents who have not undergone sexual initiation yet, 14 have already used contraception (7%). The contraception was used more frequently by people living in cities of less than 10000 inhabitants (49%), whereas contraception was used the least by respondents living in villages (38%). Interestingly, the respondents most often answered that they chose the contraception method based on its effectiveness - 161 individuals (58.12% of adolescents using contraception), while only 120 respondents answered the question about the definition of the Pearl Index correctly (24%).

Condoms were the most commonly used method of contraception in adolescents: 140 (70%) teenagers in the younger group and 65 (61.32%) in the older one. Oral contraceptive pills were the second most common method, used by 56 teenagers (28%) in the younger group and 33 (31.12%) in the older group (Tab.1). A total of 12.1% of sexually active respondents (38 individuals) use condoms and birth-control pills simultaneously. Only 2 individuals that is 0.64%, admitted to the use of post-vital contraception.

Table 1. Contraception method

Method	Younger group n = 349	Older group n = 135
Oral hormonal contraception	56	33
Contraceptive patches	4	4
Condoms	140	65
Vaginal hormonal contraception	2	3
Chemical methods	4	0
Intrauterine device	0	2
Natural methods	11	5
Coitus interruptus	28	12
Post-coital contraception	1	1
Other	2	2

As many as 172 individuals (62.1% of those using contraception) do not use any of the most effective methods of contraception while 161 individuals (58.12% of those using contraception) claim to choose the birth-control method based on its effectiveness (Tab. 2).

Table 2. The reasons for choosing a particular method of contraception.

The reason for choosing	Younger group n = 349	Older group n = 135
Price	28	18
Availability in pharmacies and stores	31	24
Convenience	71	37
Impact on health and mood	58	38
Doctor's recommendations	50	17
Effectiveness	109	51
Religious beliefs	3	5
No impact on sexual sensations	17	9
Other	2	0

In both age groups, people learn about contraception mostly from the Internet - 246 (70.5%) in the younger group and 102 (75.56%) in the older group (Tab. 3).

Table 3. Sources of information about contraception.

Source of information	Younger group n = 349	Older group n = 135
Parents	161	47
School	178	71
Peers	166	52
Internet	246	102
Leaflets	62	36
Doctor	132	70
Other	15	2

As many as 463 individuals (92.6%) concluded that condoms are the most available method of contraception, while shame was the most common problem regarding contraception availability in the younger group (168 individuals - 48.13%), and the need for a medical

examination and prescription in the older group (62 individuals - 45.93%). As much as 89% of respondents were aware that medical consultation is required before oral contraceptives can be used (Tab. 4).

Table 4. Contraception availability restrictions.

Cause of restriction	Younger group n = 349	Older group n = 135
Price	66	41
Availability in pharmacies and stores	32	20
Lack of information	107	50
Shame	167	42
The necessity of a medical exam and prescription	156	67
No restrictions	47	15

In the younger group, the level of knowledge about contraception was mostly average (208 individuals - 59.6%) and low (95 individuals - 27.22%), while in the older group most of individuals presented average (78 individuals - 57.78%) and high (31 individuals - 22.96%) level of knowledge. Despite this fact, 310 respondents (62%) have estimated their own knowledge as sufficient.

Discussion

Condoms were the most frequently chosen method of contraception among adolescents and young adults of the West Pomerania voivodeship, which corresponds with both global and national trends [3,7,13,14]. It seems disturbing that most of the respondents use condoms as a single birth-control method or in combination with a method of low effectiveness (coitus interruptus, natural birth-control methods). Neither WHO nor PTGiP recommend barrier methods as a permanent measure of contraception due to their low effectiveness rate, although both organizations point out that these methods are valuable as they protect against sexually transmitted diseases [1].

The number of sexually active people using highly effective contraception methods such as oral contraceptive pills, hormonal patches, vaginal rings or intrauterine devices is low because of fear and discomfort related with gynecological consultation and examination. It is important to point out the statement of WHO that a properly taken history is the only condition necessary to administer oral contraception in teenage girls. According to the WHO recommendations, internal examination and cytological evaluation are not necessary and restraining from them may increase the chances of a teenager deciding on hormonal contraception [2]. However, this is contradictory to the official opinion of PTGiP, which recommends to take a history, carry out a gynecological examination with transvaginal ultrasound imaging, measure blood pressure, as well as conduct breast examination every year, and cytology every 3 years in patients planning to use or already using hormonal contraception [15].

Similarly to other regions, in the West Pomerania voivodeship, the level of knowledge of young people regarding contraception is average; however, it increases with age. It is important to note that teenagers and young adults are aware of the fact that gynecological consultation is necessary before administration of oral hormonal contraception pills [14-18].

The respondents learned about contraception mostly from the Internet, which is not always a source of objective and reliable information. The website "Towards adulthood" can be used as an example, where young people can learn that contraception means "getting rid of a human being" and that condoms cause cancer [19]. Therefore, it seems necessary to create a professional website focused on reproductive health and available methods of contraception, based on the experience of doctors, the results of generally recognized scientific research, as well as global and national organizations dealing with procreational health. According to the report on sexual education of youth by CBOS, 34% of respondents believe that parents should teach their children about sex, while 59% think parents and school are equally responsible for providing this knowledge. As little as 3% of respondents think that only school should provide information regarding pregnancy prevention [8]. On the other hand, the study performed by Marshall et al. showed that young women feel a need to consult a specialist when choosing a contraceptive method [20]. The results of long-term studies performed in the group of 6662 students by Guzzo and Hayford showed that adequate education increases the chances to use contraception correctly in adolescents as well as in adults. Furthermore, teenagers with a positive attitude to contraception and better knowledge about reproduction

and use of condoms, were more likely to choose effective contraceptive methods as adults [21].

Conclusions

1. Young people have insufficient knowledge about contraception
2. Due to the shame and fear to visit a gynecologist, young people often choose more easily available but not very effective methods of birth control.
3. Most of the respondents learn about contraception from the Internet, and therefore, they are at risk of getting unreliable or incorrect information.

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