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Original Article

Contraceptive (mis)education among young adults in Higher Education

A (des)educação contraceptiva dos jovens universitários

La (des)educación contraceptiva de jóvenes universitarios

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Abstract

Objective: To investigate how the current law on sex education has affected the sex life of young adults in Higher Education on the basis of protective, prophylactic, and sexual and reproductive health surveillance behaviors.

Method: This was a quantitative cross-sectional descriptive study with a non-probability sample of convenience consisting of 365 Higher Education students from Northern Portugal. We included students attending the first year of Teaching Degree programs, therefore, younger students who would have had their Secondary Education under Law no. 60/2009 (August 6) would be included (this Law currently regulates sex education in schools). Data were collected using a questionnaire, which was submitted to descriptive and inferential statistical analysis with a confidence level of 95%.

Results: For sexual and reproductive health, health services are rarely sought: only 28.7% of respondents have participate in family planning appointments, and women reported seek it more often ($\chi 2 = 41.085$ and $p<0.000$) than men. The university's health services are even more rarely sought (13.7%), and women also seek it more often than men (11.2% versus 2.5%). Of participants, 29.6% of sexually active students do not systematically use contraceptive methods, and this behavior is more prevalent among men ($\chi 2 = 9.950$ e $p=0.002$).

Conclusion: Protective sexual behaviors are rarely present. The study recommends any interventions targeting young adults that should go beyond genital anatomy and need to introduce a holistic and integrating viewing of sexuality.

Resumo

Objetivo: Investigar o impacto que o mais recente enquadramento legal da educação sexual teve na vivência da sexualidade de jovens universitários segundo comportamentos protetores, profiláticos e de vigilância em saúde sexual e reprodutiva.

Métodos: Trata-se de um estudo de natureza quantitativa, transversal e descritivo, com uma amostra não probabilística de conveniência, constituída por 365 universitários do norte de Portugal. Foi critério de inclusão os estudantes frequentarem o 1º ano de licenciatura, procurando recrutar estudantes mais jovens, que já foram abrangidos em todo o Ensino Secundário pela Lei 60/2009 de 06 de agosto, relativa à educação sexual em meio escolar. Utilizámos um questionário na coleta de dados, que analisámos recorrendo à estatística descritiva e inferencial com um nível de confiança de 95%.

Resultados: A procura pelos serviços de saúde, no âmbito da saúde sexual e reprodutiva é baixa, apenas 28,7% frequenta as consultas de planejamento familiar, sendo o sexo feminino quem mais reporta este fato

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($\chi2$ = 41,085 e p<0,000); o recurso aos serviços de saúde da universidade é ainda menor (13,7%), também a procura é maior pelo sexo feminino em relação masculino (11,2% versus 2,5%). Dos estudantes sexualmente ativos, 29,6% não faz uma utilização sistemática de métodos contraceptivos, estando este comportamento mais presente no sexo masculino ($\chi2$ = 9,950 e p=0,002).

Conclusão: Comportamentos protetores no âmbito da sexualidade estão pouco presentes, devendo a intervenção junto dos jovens ultrapassar a genitalidade para uma visão holística e integradora da sexualidade.

Resumen

Objetivo: Investigar el impacto del más reciente marco legal de la educación sexual en la vivencia de la sexualidad de jóvenes universitarios según comportamientos de protección, de profilaxis y de control de la salud sexual y reproductiva.

Métodos: Se trata de un estudio de naturaleza cuantitativa, transversal y descriptiva, con muestreo no probabilístico por conveniencia, constituido por 365 universitarios del norte de Portugal. Fue un criterio de inclusión que los estudiantes estuvieran cursando 1° año de licenciatura, para reclutar estudiantes más jóvenes que hayan pasado toda la enseñanza secundaria regidos por la Ley 60/2009 del 06 de agosto, relacionada con la educación sexual en medio escolar. En la recolección de datos utilizamos un cuestionario que analizamos a través de la estadística descriptiva e inferencial, con un nivel de confianza del 95 %.

Resultados: En el ámbito de la salud sexual y reproductiva, la demanda de servicios de salud es baja, solo el 28,7 % asiste a consultas de planificación familiar, y quien más reporta este hecho es el sexo femenino ($\chi2$ = 41,085 y p<0,000). Este porcentaje es aún menor en quienes recurren a los servicios de salud de la universidad (13,7 %), la demanda también es mayor en el sexo femenino con relación al masculino (11,2 % versus 2,5 %). De los estudiantes sexualmente activos, el 29,6 % no utiliza métodos contraceptivos de forma sistemática, y este comportamiento está más presente en el sexo masculino ($\chi2$ = 9,950 y p=0,002).

Conclusión: Los comportamientos de protección en el ámbito de la sexualidad están poco presentes, y la intervención con los jóvenes debe ir más allá de la genitalidad, hacia una visión holística e integradora de la sexualidad.

Introduction

In published literature, a increase in studies on sexual and reproductive health (SRH) can be seen particularly due to its impact on overall social well-being. Young adults have been especially targeted, given their increasingly early sexual initiation and immaturity, which often translates to the adoption of risky behaviors. This is particularly evidenced by the lack of use or misuse of contraceptive methods, exposing young adults to sexually transmitted infections (STIs) and unintended pregnancy.[1,2]

Youth sex education is the most significant form of preventing SRH-related issues. It may help adolescents make more adequate decisions, since readily available information alone does not guarantee adequate choices.[2,3]

Despite sex education being first offered by parents and family, it is still a process of continuity and multiple participants: with the child's growth and socialization, a series of factors that directly or indirectly intervene in their learning of sex-related themes comes into play.[1,2]

In Portugal, after the fall of the country's political dictatorship in April 1974, the country's first sex education law was enacted on March 24, 1984. The law no. 3/84 governed sex education and family planning. This law second article regulated youth sex education which is supposed to be guaranteed by the State through schools, sanitary organizations, and means of social communication in cooperation with parents.[2]

A legislative evolution to progressively ensure the state would effectively deliver on its obligations (namely, guaranteed right to SRH) expected, with special emphasis on the role of parents and education agents. The current law governing sex education at schools is the law no. 60/2009, August 6. It covers all basic education, as well as secondary education; only preschool and higher education are not included in this law.[1,2]

The law no. 60/2009 is ruled by the decree no. 196-A/2010 April 9, which clearly states the sex education content that need to be taught: biological and anatomical aspects associated with utilitarian objectives, such as reduction of STIs and unintended pregnancy. While this content is in fact relevant, it is also reductionist and does not favor a global understand of sexuality. Concerning the education of sex-life-related values or ethical principles, the decree simply (and broadly) states "ethical aspects of sexuality" without any further specification.

Data from a national report of 2016 on health behaviors among Portuguese Higher Education students[4] seem to question the efficacy of the law, especially concerning the reduction of reducing risky behaviors. From 2010 to 2016 among students who had already had sexual intercourse an

increase number was observed in terms of unintended pregnancies (from 4.1% to 6%), acquisition of a sexually transmitted diseases (from 3.3% to 5.2%), and voluntarily interrupted pregnancy (from 3.2% to 4.5%).[4]

The advance from secondary education to higher education represents, for many young adults, a progress in the sense of autonomy.[3,4] More autonomy from the family, especially for students who left their homes to attend school, and this also implies greater responsibility in making choices for themselves and often leads to questioning one's own convictions, beliefs, and values, which leads these young adults to adopt fairly unhealthy behavior.[5,6]

This behavior is associated with the abuse of substances and sexual behavior that favor risky practices, such as the inconsistent use of contraceptive methods and condoms, occasional sexual partners, and the association between use of alcohol and/or drugs and sexual behavior.[5,7-9] The prevalence of these risks has particularly increased among young adults[4] and constitutes a significant public health issue that has been the target of several studies that sought to understand why young adults are adopting risky behaviors. This has become a priority social group for intervention.[7]

Knowing that access to information alone does not guarantee adequate SRH choices[2] and the added value of sex education, this study investigated how the current law on sex education has affected the adoption of protective behavior in the sex life of young adults, on the basis of risk, prophylactic, or SRH surveillance behaviors.

Methods

Given the objectives of this study, the authors developed a quantitative cross-sectional descriptive study with a sample of Higher Education students from a university in the Northern Portugal. A non-probability convenience sample was used including 365 students who were attending the first year of Teaching Degree programs at the university. The exclusion criteria were the following: second-, third-, and fourth-year students of Teaching Degree programs and students of Master's degree and PhD programs. Thus, students who would have had Secondary Education under Law no. 60/2009 (August 6) would be included (this law currently regulates sex education in schools).

Data were collected over the first semester of 2014 through a self-report questionnaire specifically designed for the study consisting of 41 open and closed questions. The average response time was 13 minutes. A pre-survey was conducted with 12 students, which showed no difficulties in complete the questionnaire. The questionnaire was subsequently approved by the Ethics Committee of the university (under ID no. 07/2014) and applied in classrooms after students had provided an explanation about the objectives of the study, its anonymous character, and voluntary participation. Socio-demographic, academic, and sexual behavior data, as well as data on SRH surveillance practices, were collected.

The Statistic Package for the Social Sciences (SPSS) software version 25.0 was used for the statistic treatment of data, which were analyzed by the descriptive and inferential analysis with a 95% confidence level.

Results

In a sample of 365 students, 254 were women (69.6%), the average age was 19 years old (19.46 +2.79), the median and mean were 19 and 18 years old, respectively. Almost half of the students came from an urban setting (46.8%), were single (95.9%), and were Catholic (83.8%). Families showed a low-educational level: 50.4% of mothers and 61.6% of fathers only attended Basic Education (9th year or lower).

Only 33.4 % of students reported talking to their parents about sexuality/contraception, out of which women were the ones who reported to talk with their parents the most (differences between genders were statistically significant; $\chi 2 = 6.741$ and $p=0.034$). Respondents who reported that they sometimes talked or not talked at all mentioned embarrassment/fear as the most common reason (15.1%) to do so.

Virtually all students (96.4%) report having had classes where sexuality/contraception were approached. However, when asked about where they had essentially acquired their knowledge about sexuality/contraception, healthcare providers were reported first (61.9%), followed by friends and colleagues (54.8%), and lastly teachers (47.9%). Women were the ones to report having received information from healthcare providers the most, and differences between genders were statistically significant ($\chi 2 = 6.320$ and $p=0.012$).

Table 1 shows the majority of students (69.3%) who already had sexual intercourse. When considering sex, men were the ones who reported to have had sexual intercourse already the most, and differences between genders were statistically significant. In their first sexual experience, 97.2% report of respondents have used some sort of contraceptive method (either on themselves or by their partner); condoms were the most frequently mentioned (74%), followed by the combination of the pill and condoms (29.3%). The mean age for first sexual experience was 17 years old (16.72 ±1.51). When considering sex, average age for men was lower than for women (16.32 versus 16.93). Gender differences on average age were statistically significant ($t = -3.073$ and $p=0.002$).

Regarding risky behaviors, the study showed that nearly 30% of students do not systematically use contraceptive methods; this behavior is significantly more expressive among men. The most frequently reported reason for not systematically using contraceptive methods was deliberate choice (67.7%) followed by a belief it interferes with sexual intercourse (29%). Among students who reported using some sort of contraceptive method, the most frequently reported method was condoms (46%) followed by contraceptive pills (34.9%). Most students report not having had sexual intercourse under the influence of alcohol nor having occasional sexual experiences; however, both of these events were reported by over 33% of students (Table 1), i.e., at least one in three students. This behavior is more frequent among men, and differences between sexes were statistically significant.

Emergency contraception use was 19.7% prevalent in this sample of students. The most frequently reported reasons for emergency contraception use were failure in contraception method (64.3%) and unprotected sexual intercourse (42.9%).

Table 1. Sexual intercourse and risky behaviors in sexual and reproductive health

Variables	Men n(%)	Women n(%)	Total n(%)	χ^2
Already had sexual intercourse (n = 365)				
Yes	88(24.1)	165(45.2)	253(69.3)	7.446**
No	23(6.3)	89(24.4)	112(30.7)	
Systematically uses contraceptive methods (n = 253)				
Yes	51(20.2)	127(50.2)	178(70.4)	9.950**
No	37(14.6)	38(15)	75(29.6)	
Already had sexual intercourse under the influence of illicit drugs (n = 251)				
Yes	20(8)	22(8.8)	42(16.7)	3.494
No	68(27.1)	141(56.2)	209(83.3)	
Already had sexual intercourse under the influence of alcohol (n = 251)				
Yes	52(20.7)	43(17.1)	95(37.8)	27.201***
No	35(13.9)	121(48.2)	156(62.2)	
Already had occasional sexual experiences (n = 251)				
Yes	54(21.5)	29(11.6)	83(33.1)	50.599***
No	33(13.1)	135(53.8)	168(66.9)	

*p≤0.05; **p≤0.01; ***p≤0.001

Regarding SRH surveillance (Table 2), 71.3% reported that did not participate in family planning appointments and an even higher percentage (86.3%) reported not resorting to the university's health services for SRH advice. Women reported seeking these services more often, and differences between sexes were statistically significant. Regarding getting tested for HIV, men reported getting tested the most, and gender differences were statistically significant.

When questioned about when is it easier for women to get pregnant, a little over half the students (54.8%) reported mid-cycle as the most likely point in time. The responses of women alone showed 62.9% do not perform breast self-examination, 77.4% do not performed cervical cytology (Pap smears), 75.1% did not vaccinate against the human papillomavirus (HPV), i.e., virtually one in every four women did not vaccinate against HPV. In women, 62.5% use oral contraception, of these 55.5% reported not taking the contraceptive pill

Table 2. Sexual and reproductive health surveillance

Variables	Men n(%)	Women n(%)	Total n(%)	χ^2
Participate infamily planning appointments (n = 362)				
Yes	6(1.7)	98(27.1)	104(28.7)	41.085***
No	103(28.5)	155(42.8)	258(71.3)	
Sought the institution's health services for SRH advice (n = 365)				
Yes	9(2.5)	41(11.2)	50(13.7)	4.217*
No	102(27.9)	213(58.4)	315(86.3)	
Get tested for HIV (n = 363)				
Yes	24(6.6)	25(6.9)	49(13.5)	9.355**
No	86(23.7)	228(62.8)	314(86.5)	

*p≤0.05; **p≤0.01; ***p≤0.0013

correctly in every cycle; when asked about what they did instead, 55.3% reported doing nothing and continuing to take the pill, 27.1% reported taking two pills, and only 17.6% reported to seek another method. However, most of these women consider their global knowledge about sexuality/contraception to be fair (62.7%) or good (34.2%).

Discussion

Students in this study showed similar results to other national studies, in terms of gender differences, sexually active young adults, and the age of the first sexual experience.[1,4,10] Despite our data covering only first year Teaching Degree students, values for sexually active young adults and age of first sexual experience are fairly similar to that from the national data published in 2016 [4] and virtually overlap another national study including only first year Teaching Degree students.[10] However, the mean age of participants in this study was lower than those reported by other national studies.[1,11]

Data show that men tend to start their active sex life early.[1,3] This sexual initiation trend is not only a result from peer pressure, but also from the wonderings associated with sexual activity that is picture by the mass media.[1] Traditional gender conceptions may explain that while young women seem to persist on the romantic idea that your first sexual experience/virginity means giving oneself over to the partner, for young men sexuality and feeling are two distinct realities and they may eventually overlap. For them, this first sexual experience is seen as an initiation test, a challenge they must overcome in order to prove their own sexual competence.[12,13]

The early start of sexual activity is a risk factor for the adoption of risky behaviors because adolescents and young adults are more likely to put themselves at risk[1,5,14]. In addition, adolescents and young adults are less experienced and they have less knowledge about prophylactic methods, which tend to be used incorrectly more often.[5,15] The above is reflected by 2014 national data that show a reduction in the use of condoms and an increase in number of sexual intercourses associated with the use of drugs and alcohol. Those who did not use condoms in their first sexual experience reported as reasons of not doing so on lack of reflection about it (42%) followed by not having condoms ready to go (31,8%).[5] Adolescents and young adults tend to have riskier and more irresponsible sexual initiation experiences, which shows a spontaneous and unplanned nature that lead to unanticipated sexual experiences.[1,5]

Despite most young adults reported having seen sexuality/contraception approached in class,[10,14] considering themselves well informed[13], and even using contraceptive methods in their first sexual experience,[4,10,13] they still showed the same risky sexual behavior reported in this study: not systematically using contraceptive methods,[1,4,11] having occasional sexual intercourse[10,16,17], and having sexual intercourse under the influence of alcohol.[5,18]

A national intervention study with a follow-up at 36 months reported that not only did the significant factors not show improvement, they also showed worsening, namely on the basis of sexual intercourse under the influence of alcohol and the lack of using condoms with occasional partners.[10] Many of these risky behaviors lead to the use of emergency contraception, which in our study showed 19,7% less prevalence compared with other studies,[11,13] perhaps because the population in our sample was younger.

The authors find it concerning that according to national data from 2010 to 2016[4] young adults in Higher Education showed worsening of risky sexual behavior despite the current law mandating the use of curriculum time in schools exclusively

for sex education, despite the legal designation of various agents to that effect (given parents are recognized not always sufficiently skilled to fulfill this demand)[11,19], and despite students reporting they resort to other sources of information).[10,11] While the healthcare provider is often reported as one of these sources,[11] many young adults do not feel the need to seek health services for credible and complete information. While there is free access to various contraceptive methods, incorrect usage is still prevalent.[12,20]

A national study assessing contraceptive practices among women in Portugal showed that younger women are precisely the ones who seek for family planning appointments and physicians are the less mentioned as source of information.[20] It should be noted that young adults in our study who reported not systematically using contraceptive methods did so on a deliberate choice (67.7%).

These are the first autonomous — and perhaps not very well reflected through — choices made by young adults, and they may decisively influence their SRH.[3,4] Even young women who tend to seek family planning appointments more often showed a decrease in adherence to these appointments (27,1%). This may have a potentially detrimental effect on SRH, given these women will lack a thorough understanding of the proper protective/prophylactic measures that could be given by healthcare providers[11,14] and consequently may not implement them individually, including choosing and using the proper contraceptive methods or perform cervical cytology regularly.

Understanding adherence to contraception is paramount in the setting of SRH, as it is understanding how reasons for adherence or non-adherence may reveal subjects' perception of their own (un)vulnerability to risk.[1] The authors pose the following questions: Do technology advancements in the fight against STIs (namely HIV and AIDS), such as the introduction of antiretrovirals, have changed representation and perception of risks?[21]; Has a more favorable stance on over the counter emergency contraception (commercially available in Portugal) led to a relaxation in preventive conduct for pregnancy and STIs? Perhaps, a sense of safety relaying on postcoitus contraceptive methods may have allowed the multiplication of risky behaviors.[22]

Understanding sexual behavior beyond its mere cognitive aspects[3,13,23] is essential for the promotion of an effective sex education. Prevention in SRH is paramount, and risk denial is the main barriers to implementing prevention.[24]

As study limitations, we highlight the fact this study covers only a single Portuguese region that has its own sex education policies. This is a significant and urgent matter for contemporary society. It generates renewed cause for concern virtually worldwide and translates into a growing investment in youth sex education for the adoption of protective sexual behavior. Considering the pressing need to understand whether young adults seek health services for SRH advice, use contraceptive methods systematically, and adhere to protective sexual behaviors, we consider it desirable for this study to be replicated in various countries of various continents.

Conclusion

An increasing number of young adults have initiated an active sex life with prevalent risk behaviors, including not using or inconsistently using contraceptive methods, which exposes them to STIs and/or unintended pregnancy. Young men show more risk behaviors, such as having sexual intercourse under the influence of alcohol, occasional partners, and not systematically using contraceptive methods. Young adults reported infrequent adoption of protective and/or prophylactic SRH behaviors, i.e., seeking family planning appointments and their institution's health services; however, these behaviors were more prevalent among women. Students showed little sensibility to the promotion of SRH and little desire to seek existing resources. The few resources sought are done so quite restrictedly, and students do not seem to understand the significance of regular SRH surveillance. As shown in diverse studies, knowledge alone does not guarantee adequate choices. Sex education should go beyond genital anatomy and it

should introduce a holistic and integrating view of sexuality, where psychosocial aspects are largely explored to the detriment of a traditionalist sex education and ideological blindfolds.

Contributions

Castro JF, Almeida CMT e Rodrigues VMCP conceived the study, analyzed and interpreted data, drafted the manuscript, provided critical feedback relevant to the content of the study, and approved the final version to be published.

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