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Relationship between formal education and pregnancy planning

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ABSTRACT. The article addresses the relationship between education and family planning during the first child's pregnancy to identify the educational impact on family planning. The research is exploratory-descriptive, with a quantitative, cross-sectional approach. From 2014 to 2019, data was collected using a validated research instrument, Parenting Planning in the Context of Bioethics; the data is presented in four tables. In total, 1608 questionnaires related to the first child's pregnancy were answered. The research was conducted in the State of Paraná, in religious, educational, and social institutions. As for the results, those who had completed college presented a percentage of 63.5% of planning their first child's pregnancy, while those who had not studied presented 25.2%. What can be noticed, and this is the highlight of the research, is that the family planning indices are higher when the participants have completed a study cycle: 4th grade, high school, and college, in relation to pregnancies that occurred during school periods. Thus, it is concluded that formal education significantly impacts family planning, especially since pregnancies that occurred while people were in the study phase had lower rates of family planning than pregnancies that occurred when people had already completed their studies.

Keywords: family; sex education; family planning.

Relação entre escolaridade e planejamento da gravidez

RESUMO. O artigo aborda a relação entre escolaridade e planejamento familiar, no momento da gravidez do primeiro filho, com o objetivo de identificar o impacto da escolaridade sobre o planejamento familiar. A pesquisa é do tipo exploratório-descritiva, com abordagem quantitativa, transversal, cujos dados foram coletados por meio de aplicação de instrumento de pesquisa validado Planejamento da Parentalidade no Contexto da Bioética, no período de 2014 a 2019, dados estes apresentados por meio de 4 tabelas. No total foram respondidos 1608 questionários relacionados à gravidez do primeiro filho. A pesquisa foi realizada no Estado do Paraná, em instituições religiosas, educacionais e sociais. Quanto aos resultados, os que haviam concluído faculdade apresentam percentagem de 63,5% de planejamento da gravidez do primeiro filho, enquanto os que não haviam estudado apresentam 25,2%. O que se percebe, e este é o ponto de destaque da pesquisa, é que os índices de planejamento familiar são superiores quando os participantes haviam concluído um ciclo de estudo: 4ª. série, ensino médio, faculdade, em relação às gravidezes ocorridas durante os períodos escolares. Conclui-se que a educação formal impacta de forma significativa no planejamento familiar e principalmente que as gravidezes que ocorreram enquanto as pessoas estavam em fase de estudo apresentaram menores índices de planejamento familiar do que as gravidezes que ocorreram quando as pessoas já haviam concluído seus estudos.

Palavras-chave: família; educação sexual; planejamento familiar.

Relación entre Educación y Planificación del Embarazo

RESUMEN. El artículo aborda la relación entre la escolaridad y la planificación familiar, en el momento del embarazo del primer hijo, con el fin de identificar el impacto de la escolaridad en la planificación familiar. La investigación es exploratoria-descriptiva, con enfoque cuantitativo, transversal, cuyos datos fueron recolectados a través de la aplicación de un instrumento de investigación validado Planificación de la crianza en el contexto de la bioética, de 2014 a 2019, datos presentados a través de 4 tablas. En total se contestaron 1608 cuestionarios relacionados con el embarazo del primer hijo. La investigación se realizó en el Estado de Paraná, en instituciones religiosas, educativas y sociales. En cuanto a los resultados, las que habían terminado la universidad tenían un porcentaje del 63,5% de planificación del embarazo de su primer hijo, mientras que las que no habían estudiado tenían un 25,2%. Lo que se puede ver, y esto es lo más destacado de la investigación, es que las tasas de planificación familiar son más altas cuando los

participantes habían completado un ciclo de estudios: 4º. grado, bachillerato, universidad, en relación a los embarazos ocurridos en periodos escolares. Se concluye que la educación formal tiene un impacto significativo en la planificación familiar y especialmente que los embarazos que ocurrieron cuando las personas estaban en la fase de estudio tuvieron tasas más bajas de planificación familiar que los embarazos que ocurrieron cuando las personas ya habían terminado sus estudios.

Palabras clave: familia; educación sexual; planificación familiar.

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Introduction

This article addresses the relationship between education level and family planning, especially at the time of pregnancy of the first child. It is the result of bibliographical research and field research. It is based on the problem and the hypothesis that education strongly influences family planning. For this reason, it seeks to determine whether people with a higher level of education plan their pregnancies better. In order to situate the influence of education on family planning, the research also analyzes other variables that may be linked to the issue studied, such as the relationship between education and the age of the first pregnancy, cross-referencing the data with the age issue.

Family planning encompasses a wide-ranging discussion and involves various areas and levels of care, including community participation. It is one factor that makes it possible to identify and meet people's needs. Family planning is a right advocated and supported by the Federal Constitution, in Article 226, paragraph 7, and Law 9.263 of 1996, which regulates it (Pierre & Clapis, 2010). In Brazil, family planning is linked to the Integrated Women's Health Care Program (PAISM), created in 1984, and has played a significant role in public health policy. The program includes integrality and equity in women's care, intending to address health globally and at all life cycle stages (Mozzaquatro & Arpini, 2017).

Nowadays, discussions about family planning have broken religious boundaries and become part of the agendas of various other institutions, schools, and health services. Demographic issues aside, the ethical questions involved in an unplanned pregnancy, and the possible consequences for mother and child are also being considered.

Evidence shows that there has been a significant change in family planning in recent decades. According to data from UNICEF (The Right to Be an Adolescent, 2011), the demographic increase from the early 1970s to today has fallen from 2.1% to 1.6% per year. This is due to many factors, such as the use of contraception, which has become part of the routine of 50% of women of childbearing age, the urbanization of society, greater access to formal education, and others. As a result, the average number of children per woman in developing countries has fallen from 6 to 4.

Formal education can influence the scenario and, more specifically, sex education. In Brazil, like in Europe, hygienist medicine took charge of issues involving sexuality and began to associate certain sexual practices with diseases, interfering in school education. At the time, boarding schools became the ideal model for educating young people and preventing them from suffering undesirable sexual influences (Ribeiro, 2004). The relationship between medicine and sex education in Brazil deepened throughout the 19th century and mid-20th century. From the 1920s onwards, dozens of sex education and guidance books were published. The books were authored by doctors, professors, and priests, based on scientific data of the time, and aimed to guide the sexual practice of individuals (Ribeiro, 2004).

It was not until the 1960s that sex education entered some Brazilian schools and became part of the curriculum in São Paulo, Rio de Janeiro, and Belo Horizonte. From 1964 to 1978, there were several attempts to make sex education effective in schools. However, all initiatives were blocked by the military regime, whose government repressed not only political demonstrations but also censored expressions of sexuality and the implications for behavior patterns that resulted from them. During the 1980s and the following decades, with the politics opening up, sex education initiatives and school projects were resumed, but they usually became projects without continuity.

The issue of sex education in Brazil only became government policy with the creation of the National Curriculum Parameters, and it was only in 1997 that sexual orientation became part of the PCNS as a cross-cutting theme. At this point, the state showed its interest, motivated by the rise in AIDS, other sexually transmitted diseases, and teenage pregnancy. From then on, the school became where children, adolescents,

and young people developed. This is based on educational action that enables them to discern their health concerning sexuality (Parâmetros Curriculares Nacionais, 2000).

Formal education aims to pass on sex education to young people and adolescents. It is worth remembering that young people in the 21st century communicate and technologically interact with adults and society. The new information technologies have facilitated communication, and young people show agility and the ability to access information. The technological changes that have taken place in modern society have caused a gap in the dialog between the generations. Carrier (1994) also points out that we are dealing with today's first technological generations. Many educators consider daily contact with social networks to be excessive. Information has changed the way young people, families, and educators relate to each other. Young people have difficulties communicating and relating to the world due to their lack of knowledge and resistance to their own world.

For Carrier (1994), the role of the educator in society is based on redefining the purpose of education. As such, it is up to them to educate for freedom, integral human formation, developing intelligence, discernment, and ethical responsibility. Sex education and education, in general, offered to young people and adolescents is intended to shape behavior, whether in schools or within the family context. However, aspects of sexuality still go through institutional stabilization, family constitution, and procreation (Louro, 1997; Bernardi, 1985).

In 1997/99, the Brazilian federal government took the initiative to include sexuality from a gender perspective as a topic for discussion in schools. Since then, the proposal has aimed to discuss issues relevant to society in the classroom through school content. The themes include ethics, cultural plurality, the environment, health, work, consumption, and sexuality education. The proposal focuses on disease prevention but is open to discussing sexuality from a gender perspective. The themes are incorporated across the curriculum. This cross-curricular approach can occur through the programming of content or through issues related to the topic. The content is organized into three blocks: Body and sexuality matrix, Gender relations, and Prevention of STI/HIV/AIDS diseases (Parâmetros Curriculares Nacionais, 2000).

According to the National Curriculum Parameters (PCNS) guidelines, new subjects should not be created to discuss the themes envisaged as cross-cutting themes. However, they should be incorporated into discussions in all fields of knowledge. Altmann (2001) points out that concerning sexual orientation, the content taught at school should encourage an understanding of the sexual act, intimacy, and similar issues pertinent to the sexuality of young people and adults. Another fact to consider is that erotic experimentation, curiosity, and desire are seen as common when they occur as a couple. In this way, masturbation and other forms of sexual manifestation, even in the individual sphere, are not clearly covered. Dialogue between the various disciplines aims to promote transdisciplinarity (Altmann, 2001).

The reasons the government considered sex education in the classroom are diverse. Among them is the reduction of early pregnancies, which continues to be one of the factors that keep girls away from school. The PCNS aimed to stimulate debate on teenage pregnancy and the high rates of HIV/AIDS that occurred in the 1980s. The objectives were:

> Promote reflections and technical discussions with teachers, pedagogical teams, parents, and guardians to systematize pedagogical action for human development, taking into account the moral principles of each involved and respecting Human Rights (Brazil, 1997, p. 287).

Sex education in schools focuses on the biological and informational aspects. The resumption of discourse on sexuality still has a hygienist bias and indicates censorship from society. Health is now understood as a right inherent to the exercise of citizenship. Historically, health was introduced into schools in Brazil to train students to make decisions and respond to social control (Maia, 2004).

Although the PCNS present educational and reflective proposals, the intention of the guidance aimed at young people and adolescents is to warn about the dangers of sex. The proposal for sex education in schools emphasizes the genital aspects of sexuality, thus repeating the same education from the 19th century and earlier. Instead of promoting sex education at a broad level that takes into account cultural and social aspects and individual particularities within a collective context. So that it provides an exchange of information and encourages various discussions about the dimensions of sexuality. Considering values and attitudes that offer respect for life, responsibility, justice, solidarity, and equity (Maia, 2004; Melo, 2004).

Concerning young women's pregnancies, the National Curriculum Parameters (PCNS) still point to the need to broaden the objectives aimed at educators. The number of young students who are pregnant and who drop out of school as a result of pregnancy and after pregnancy is also high. The Ministry of Education states that it does not have specific programs for this public (mothers and pregnant women of school age who drop out of school). However, it is developing two programs to prevent teenage pregnancy and offering daycare (Moreno & Gonçalves, 2015). Another initiative of the Ministry of Education is the project Health and Prevention in Schools (SPE) (Decree No. 6.286/2007; Ordinance No. 1.861/2008), launched in Curitiba in 2003. The project aims to build integrated public policies, led by the Ministries of Health, Education, Unesco, and Unicef, developed in all federation states, aiming to promote preventive actions and health care.

Its approach prioritizes the prevention of STIs/HIV/AIDS, teenage pregnancy, and drug use. It also deals with gender relations and sexual diversity in schools. The action is supported by the continuing training of professionals, the production of teaching materials, and the provision of condoms in schools. The main focus is on reducing the vulnerability of adolescents and young people to sexually transmitted diseases and HIV/AIDS (Sexual Rights, Reproductive Rights and Contraceptive Methods, 2006).

Under the Ministry of Health, the Rede Cegonha project is in 85% of the country's municipalities. It aims to create a care network to ensure women's right to reproductive planning and humanized care during pregnancy, childbirth, and the puerperium. To reduce infant and maternal mortality. Along the same lines as the PCNS. UNESCO in Brazil has produced a document with technical guidelines for sex education aimed at the Brazilian scenario. The proposal presents some approaches and principles for learning about the dynamics of sexuality. The document is intended to guide the development of curricula, which should be adapted according to local reality. The objective is to:

> Provide accurate information that arouses the curiosity of children, adolescents, and young people, involving growth and development, sexual anatomy and physiology, reproduction, pregnancy and childbirth, HIV/AIDS/STIs, family life and interpersonal relationships, culture and sexuality, sexual behavior, sexual diversity, abuse, gender-based violence and practices of risk and harm.
> Offer children, adolescents, and young people the opportunity to explore values, attitudes, and norms regarding the experience of sexuality (individual, family, peer, and community), sexual behavior, health, risks and decision-making, principles of respect, gender equality, and human rights.
> Facilitate the acquisition of crucial sexual behavior skills for decision-making, self-confidence, communication, negotiation, and the ability to refuse sexual violence.
> Encourage children, adolescents, and young people to take responsibility for their own behavior and respect the rights of others. Encourage acceptance and empathy, regardless of health status or sexual orientation (Technical guidelines for sexuality education for the Brazilian scenario, 2014).

UNESCO also works with organizations and social movements to ensure that sex education is recognized as part of human rights and sexual and reproductive rights, including ethics, freedom, autonomy, and quality of life. Thus, Cerqueira, Miguez, Meroni, and Verreschi (2011) point out that one of the problems of sex education lies in empowering young people and adolescents to face the challenges. This confirms the need to argue with the professionals who are responsible for the quality of the information transmitted to young people and adolescents on the subject of sexuality.

As a consequence of our historical heritage, almost all information about pregnancy is geared towards women. When it comes to sexuality, family planning, and parenting. Research shows the impact of pregnancy on the lives of adolescents and young women. However, few studies deal with pregnancy from the perspective of young men and adolescents. There is also the issue of abortion or even single adult mothers. Epidemiological studies are essential to clarify many questions about adolescent parenthood. Understanding these phenomena is crucial in implementing adolescent public health and prevention policies (Levandowski & Piccinini, 2004).

Teenage pregnancy, as well as occurring very early in a woman's life, often brings with it a lack of recognition of paternity. This can lead to various problems in the young mother's and her child's lives. Caring for the child is often subordinated to the mother's responsibility and involves the maternal family, that is, maintaining the costs of education and survival for both. Some authors state that the focus on pregnancy and parenthood is directed towards occurrences in adulthood. When it involves teenage pregnancy, the focus is on the maternal side. For young women and adolescents, pregnancy can bring a series of physical, psychological, social, and economic changes (Paulino, Patias, & Dias, 2013).

According to Lyra da Fonseca (1997), paternity in adolescence is covered in silence and shyly shows a relationship between adult society and young people that is not always honest, nullifying paternity. Furthermore, this can socially encourage young adolescent boys not to prevent it. Changing the mentality about fatherhood includes male participation. That is why breaking down cultural and ideological barriers fed by society is necessary. Historically, the care of children has been a woman's obligation, and men have been considered incapable of dealing with them. For Lyra da Fonseca (1997), one possibility lies in intensive interventions for young adolescent males, with specific information aimed at helping them with the responsibilities of fatherhood.

Although the school is considered a hostile environment for sexuality, it is an important agent for experiencing sexuality. This can be seen in school life itself. The sex education work carried out in schools still needs a different approach to that carried out in the family. Parents play their role legitimately by passing on values to their children. It is up to the school to broaden knowledge, providing favorable conditions for young people and adolescents to reflect and express their opinions (Sayão, 1997).

Certain sections of society believe that discussions about sexuality and sex with young people and adolescents will induce them to have sex. Misinformation and the weakness of sex education is an issue that still needs to be better addressed. Teachers are preoccupied with teaching the basic subjects of the school curriculum. As a result, sex education is often restricted to individual projects. Learning and reflecting on sexuality is also necessary for health professionals, even if they are not directly involved in educating young people. Young people and adolescents can often turn to health professionals at certain times to ask for advice on sexual health.

The educational program adopted in twenty schools in the state of Minas Gerais indicates that when sex education is a continuous proposal and with the active participation of students, it manages to change the sexual behavior of young people and adolescents. The Affective-Sexual Education Program offered activities for 4,795 students, with debates on topics related to responsible sexual behavior, and lasted one school year. The researchers point out that the program generated significant changes in the student's sexual behavior. They also observed that the periodic questioning of young people and adolescents about sexuality and sex neither encouraged nor delayed the onset of the first sexual relationship (Hugo et al., 2011).

The teachers believe that the school environment is the ideal place to discuss issues related to sexuality. However, they admit to a lack of pedagogical planning in the classroom and the continuity of discussions that broaden possible approaches to sexuality. Some teachers often deal with the topic through lectures or personal initiatives (Quirino, 2014).

The school still maintains the current social order based on the family institution of father, mother, and child. As a consequence, Bernardi (1985) points out that the school limits any sexual gesture that is not oriented towards the foundation of the family. For this reason, when the subject arises from sexuality and goes beyond the confines of current family institutions, it is forbidden and disqualified by the school. Of course, sexuality goes beyond reproductive issues, but avoiding unwanted pregnancies is one of the goals of sex education. In this context and the context of school institutions, churches, and social environments, it is important to value and investigate the direct relationship between formal education, schooling, and family planning at the time of pregnancy of the first child. In this specific way, the research seeks to present evidence of the data collected in the institutions.

Methodology

This is an exploratory-descriptive study with a quantitative approach, developed using the cross-sectional research method, whose field research was carried out using the research instrument Parental Planning in the Context of Bioethics (Sanches, Krum, Rigoni, Sato, & Santos, 2015). The survey instrument consists of 56 questions related to family planning. This instrument makes it possible to identify, among other elements, the influence of schooling on family planning. In this article, we analyzed the questions related to the participant's schooling and age at the time of the first child's pregnancy and whether the pregnancy was planned.

This research is part of a project approved by the PUCPR Research Ethics Committee with opinion 770.977, dated 08/27/2014. The questionnaires were administered in various locations in the state of Paraná, in Apucarana, Campo Mourão, Curitiba, Jacarezinho, Londrina, São José dos Pinhas, and Toledo. The research was carried out in meetings organized by religious, educational, and social institutions between 2014 and

2019, 45% of which were in religious meetings, 35% in meetings with parents of students in schools, and 20% in social spaces, such as mothers' clubs and residents' associations. This is a joint effort by several members of the Parentality Study Group, comprised of undergraduate, master's, and doctoral students. A total of 1608 valid questionnaires relating to the pregnancy of the first child were answered.

Attention is drawn to the research participants' profiles since the group surveyed differs from the general population regarding schooling, which is relevant to this article. The *Brazilian Institute of Geography and Statistics* (IBGE, 2010) in the state of Paraná shows that the percentage of "[...] women aged 10 or over who had children with no schooling or incomplete primary education [...]" is 51.63% while in the research sample, this percentage is 17.9%. Our research shows that when having their first child, 48.9% of the sample fell into the category of 'no education and incomplete primary education.' In this way, the research sample currently has a higher level of education than the population of Paraná.

Of the participants in the survey, 74.5% indicated that they were over 36 years old, and this also needs to be taken into account when interpreting the data since, for most of the interviewees, the pregnancy of their first child may have occurred more than twenty years ago, indicating that the survey not only reflects the current reality but also allows for a retrospective look. On the other hand, the significant number of interviewees makes it possible to identify trends that may be present in other samples of the population as a whole. In any case, the analysis of the data needs to take into account the profile of the interviewees shown in Table 1.

Table 1. The general profile interviewees: by gender, age, and schooling.

Gender	Percentage	Number of interviewees
Male	24.9	401
Female	73.9	1189
Other	.4	6
NA	.7	12
Current age	Percentage	Number of interviewees
Between 18 and 25	3.9	62
Between 26 and 35	18.7	301
Between 36 and 45	31.9	513
Between 46 and 60	32.5	523
Over 60	10.1	162
NA	2.9	47
Current education level	Percentage	Number of interviewees
Didn´t conclude elementary school	17.9	288
Concluded elementary school	32.0	514
Concluded high school	31.7	510
Concluded college	16.0	258
NA	2.4	38
Education level during pregnancy of first child	Percentage	Number of interviewees
Hadn't studied	10.1	163
Was in the initial grades of elementary school	10.3	165
Had concluded 4th grade	15.1	243
Was between 5th and 8th grade	13.4	216
Was in high school	15.2	244
Had concluded high school.	14.5	233
Was in college	6.5	105
had already concluded college	13.8	222
N/A	1.1	17
Total	100	1608

Source: Authors (2021).

Research results

The research results are presented in three more tables, which cross-reference the schooling level of the group surveyed at the time of their first child's pregnancy with other variables, such as the perception of planning the first child's pregnancy, the age of this pregnancy, and the current age of the interviewees.

When the data were crossed, as shown in Table 2, between schooling level at the time of the first child's pregnancy and whether or not the pregnancy had been planned, it can be seen that those who had completed university had the highest percentage of planning the first child's pregnancy (63.5%). However, at the same

time, there is no homogeneous growth that would allow us to say that as schooling increases, there is a higher rate of planning the pregnancy of the first child. What is noticeable, and we will come back to this in the data analysis, is that family planning rates are higher when people have completed a cycle of study - 4th grade, high school, college - about pregnancies that occurred during these school periods.

Table 2. Data cross-references between 'Schooling during the pregnancy of the first child' and 'Planning the pregnancy of the first child.'

Schooling during the pregnancy of the first child		Planning the pregnancy of the first child						Total
		zero	1	2	3	4	NR	
Hadn´t studied	N.	86	16	9	8	41	3	163
	%	52.8%	9.8%	5.5%	4.9%	25.2%	1.8%	100.0%
Was in the initial years	N.	70	28	23	9	31	4	165
	%	42.4%	17.0%	13.9%	5.5%	18.8%	2.4%	100.0%
Had concluded 4th grade	N.	95	16	20	19	87	6	243
	%	39.1%	6.6%	8.2%	7.8%	35.8%	2.5%	100.0%
Was between 5th and 8th grade	N.	96	17	17	21	64	1	216
	%	44.4%	7.9%	7.9%	9.7%	29.6%	0.5%	100.0%
Was in high school	N.	107	18	17	19	79	4	244
	%	43.9%	7.4%	7.0%	7.8%	32.4%	1.6%	100.0%
Had finished high school	N.	78	12	8	19	114	2	233
	%	33.5%	5.2%	3.4%	8.2%	48.9%	0.9%	100.0%
Was in college	N.	46	8	5	8	38	0	105
	%	43.8%	7.6%	4.8%	7.6%	36.2%	0.0%	100.0%
Had finished college	N.	46	8	13	12	141	2	222
	%	20.7%	3.6%	5.9%	5.4%	63.5%	0.9%	100.0%
/	N.	8	1	0	1	6	1	17
	%	47.1%	5.9%	0.0%	5.9%	35.3%	5.9%	100.0%
Total	N.	632	124	112	116	601	23	1608
	%	39.3%	7.7%	7.0%	7.2%	37.4%	1.4%	100.0%

Source: Authors (2021).

Aware that other factors can influence family planning, Table 3 shows the question of age when pregnant with the first child. This variable reveals more constant indices indicating that the later the pregnancy of the first child, the greater the family planning, with a big difference, for example: among those who became pregnant under the age of 15, only 13.0% gave the highest score for planning the pregnancy of the first child, while this index reaches 71.4% for those who became pregnant over the age of 31.

Table 3. Data cross-references between 'Age at first child's pregnancy' and 'Did you plan your first child's pregnancy?

Pregnancy age of first child		Planned the pregnancy of the first child						Total
		zero	1	2	3	4	NR	
Under 15 years old	N.	27	5	10	2	7	3	54
	%	50.0%	9.3%	18.5%	3.7%	13.0%	5.6%	100.0%
Between 16 and 18 years old	N.	155	27	18	20	50	4	274
	%	56.6%	9.9%	6.6%	7.3%	18.2%	1.5%	100.0%
Between 19 and 21 years old	N.	207	33	26	26	106	4	402
	%	51.5%	8.2%	6.5%	6.5%	26.4%	1.0%	100.0%
Between 22 and 30 years old	N.	196	51	53	59	339	9	707
	%	27.7%	7.2%	7.5%	8.3%	47.9%	1.3%	100.0%
Over 31 years old	N.	18	6	3	6	85	1	119
	%	15.1%	5.0%	2.5%	5.0%	71.4%	0.8%	100.0%
NA	N.	29	2	2	3	14	2	52
	%	55.8%	3.8%	3.8%	5.8%	26.9%	3.8%	100.0%
Total	N.	632	124	112	116	601	23	1608
	%	39.3%	7.7%	7.0%	7.2%	37.4%	1.4%	100.0%

Source: Authors (2021).

The sample profile studied, with a wide range of ages, makes it possible to gather data that could reveal whether there has been a change in the age at which they became pregnant with their first child over the last few decades. We can propose a table that relates the interviewee's current age to the approximate period in which they became pregnant, bearing in mind that the vast majority became pregnant between the ages of 20 and 30. So the 18 to 25 age group may have had their first child in the current decade, the 26 to 35 age group

mostly had their first child in the first decade of the 21st century, the 36 to 45 age group experienced this situation in the 1990s, the 46 to 60 age group in the 1980s and the majority of those over 60 would have had their first child before 1980. Table 4, therefore, shows that of the people in the age group who had their first child in the past decade, more than 31.9% did so under 18, compared to 13.9% of those who became pregnant in the 1980s.

Table 4. Data cross-references between 'Current age of interviewee' and 'Age of pregnancy of first child.'

Respondent's current age		Age of first pregnancy / or got someone pregnant for the first time						Total
		Less than 15 years old	Between 16 and 18 years old	Between 19 and 21 years old	Between 22 and 30 years old	Over 31 years old	NA	
Between 18 and 25	N.	4	30	17	8	2	1	62
	%	6.5%	48.4%	27.4%	12.9%	3.2%	1.6%	100.0%
Between 26 and 35	N.	24	72	75	111	12	7	301
	%	8.0%	23.9%	24.9%	36.9%	4.0%	2.3%	100.0%
Between 36 and 45	N.	12	77	146	231	39	8	513
	%	2.3%	15.0%	28,5%	45.0%	7.6%	1.6%	100.0%
Between 46 and 60	N.	10	63	121	265	51	13	523
	%	1.9%	12.0%	23.1%	50.7%	9.8%	2.5%	100.0%
Over 60	N.	4	24	33	72	11	18	162
	%	2.5%	14.8%	20.4%	44.4%	6.8%	11.1%	100.0%
NA	N.	0	8	10	20	4	5	47
	%	0.0%	17.0%	21.3%	42.6%	8.5%	10.6%	100.0%
Total	N.	54	274	402	707	119	52	1608
	%	3.4%	17.0%	25.0%	44.0%	7.4%	3.2%	100.0%

Source: Authors (2021).

Data analysis: schooling and family planning

The hypothesis of this article, which predicted better pregancy planning the higher the level of schooling, needs to be questioned. The data confirm the hypothesis in relevant aspects but not in a linear way. The data analyzed may indicate that schooling, or formal education, is not a factor that can be understood in a homogeneous way; that is, it needs to be analyzed more integrated with other factors, such as people's age.

The complexity and richness of the sample studied in different locations and regions with different levels of urbanization and represented by a population of a wide range of ages may also point to significant heterogeneity in educational processes and projects. Even so, the hypothesis is generally confirmed since those who had their first child after completing higher education had a high rate (63.5%) of family planning. In comparison, those who had not studied when having their first child had a lower percentage (25.2%).

However, the most important aspect that this research reveals, which differs from the hypothesis, is that pregnancies that occur when a person is studying have a lower planning rate than pregnancies that occur when the person has completed the corresponding study cycle. In other words, pregnancies that occur during schooling have a lower rate of family planning than pregnancies after finishing school. This can be seen from a careful reading of Table 2, which shows that there is a significant jump between (a) the planning of pregnancy of the first child occurring when the 4th grade had been completed (35.8%) concerning pregnancy occurring during the initial grades (18.8%); (b) the planning of pregnancy occurring when high school had been completed (48.9%) about pregnancy occurring while studying in high school (32.4%); (c) the planning of pregnancy occurring when college had been completed (63.5%) about pregnancy while attending college (36.2%).

This data shows that family planning is increasing with the completion of a new cycle of studies and also points to less planning for pregnancies that occur during cycles of studies. This reinforces the thesis of the importance of sex education in school curricula and also points to the problem of school pregnancy, aspects that we will return to shortly.

It is also important to note that schooling is not the only factor in maturing parental plans. As Table 3 shows, age is a constant factor in this maturing, so pregnancies at a higher age tend to be accompanied by greater family planning.

Sexual and reproductive education in schools

In 1997/99, the Brazilian federal government took the initiative to include sexuality from a gender perspective as a topic to be discussed in schools. The proposal is to discuss topics considered relevant to society in the classroom as school content. The suggested topics are ethics, cultural plurality, the environment, health, work, consumption, and sexuality education. The discourse adopted in the proposal is focused on disease prevention, but it also opens up the discussion of sexuality from a gender perspective in the school environment. The themes should be incorporated across the curriculum. This suggested cross-curricular approach can occur through content programming or whenever issues related to the topic are suggested. The content was organized into three blocks: Body and sexuality matrix, Gender relations, and Prevention of HIV/AIDS diseases (Parâmetros Curriculares Nacionais, 2000).

The text is flawed in its guidelines, according to Altmann (2007, p. 580), who suggests that the content worked on with students should "[...] encourage the understanding that the sexual act and similar intimacies are manifestations pertinent to the sexuality of young people and adults and not children". For the author, the text, as proposed, has a normative tendency towards sexuality.

According to the PCNS, sex education should be approached through dialog between the various disciplines, thus promoting transdisciplinarity. However, due to several factors, including the fragmentation of teacher training, this does not happen, which prevents this work from being carried out fruitfully. According to Quirino (2014, p. 31), "[...] the sex education work implemented by teachers in schools is still *ad hoc* and has not been implemented in a transversal way."

Due to the difficulties of greater integration pointed out above, perhaps the reasons that led the government to think about bringing sex education into the classroom have not yet had the desired effects, among them the reduction in early and unplanned pregnancies, which continues to be one of the factors that keep young women away from school, also identified in this research, Table 4, as a current problem.

As for the approach to HIV/AIDS in schools, most of the time, only the negative aspect is emphasized. Thus, to draw students' attention to preserving their individual and collective health, the school has taken up the discourse on sexuality, but still with a hygienist bias. It is known, however, that talking about sex and sexuality from this point of view impoverishes the rich dimension of the human being, which can only be worked on from a transdisciplinary perspective. Although the PCNS presents educational and reflective proposals, this guidance intends to alert young people and adolescents to the "[...] harmful effects of sexual practice" (Maia, 2004, p. 166). Emphasizing that irresponsible sex can be harmful to health and also result in an unplanned pregnancy would be healthy if this guidance were part of a broad discussion on sexuality. When the individuality of each person and their cultural and social aspects are disregarded, the discussion regarding sexuality becomes mere counseling, and practical education in parental responsibility does not take place.

Sex education that also focuses on parental responsibility needs to overcome the legacy of many centuries in which pregnancy was seen as the sole responsibility of women. As a consequence of this heritage, almost all information about pregnancy is geared towards women. When it comes to sexuality, family planning, and parenting, the responsibility of one character is hidden in most studies. Research shows the impact of pregnancy on the lives of adolescents and young people. However, few studies deal with pregnancy from the perspective of young men and adolescents. This is a repeat of what happens when the subject is abortion or even single adult mothers. The Father figure rarely appears in the research (Levandowski & Piccinini, 2004).

Given that teenage pregnancy not only occurs very early in a woman's life but also brings with it the embarrassment for the young woman of not having her child recognized by the father. This brings many problems for the young mother and her child. She will have to pay for the care, education, and survival. Society still refuses "[...] to hold the man responsible for the pregnancy. This can be seen in the fact that the data available on pregnancy always deals with motherhood" (Luz & Berni, 2010, p. 43). Other authors state that the focus on pregnancy and paternity is directed towards cases involving adults.

When it involves teenage pregnancy, the approach is always from the female perspective (Paulino et al., 2013). Adolescent fatherhood "[...] has been covered by silence, which timidly turns into a whisper" (Paulino et al., 2013, p. 66). This silence shows that adult society does not always have honest relationships with young

people, as it socially annuls paternity. Furthermore, the socially encouraged absence of a father encourages adolescent boys to be preventative. Silence means that the baby is seen as the mother's alone.

Pregnancy during school time

The research carried out, Table 2, indicates that pregnancies occurring at school time are less planned than those occurring when people have finished school, and, as indicated in Table 4, teenage pregnancy continues to be a reality today. However, a critical reading of the National Curriculum Parameters (PCNS), in their objectives and justifications, reveals that educators lack guidance on how to act after an adolescent or young person becomes pregnant. When a person shows signs of being ill or a victim of abuse, the school refers them to the health unit or the Guardianship Council, but pregnant girls do not receive any special care from the schools, so they do not drop out of school. School management does not have to inform the Education Department about cases of student pregnancy. In the same way, municipal departments usually do not have information on the number of young students who are pregnant, whether the girls who drop out of school are pregnant, or whether they return to school after having their children.

Pregnancy at school is not limited to teenage pregnancies. However, it is certainly during this period that unplanned pregnancies have the most significant impact on women's lives from a physical, emotional, and social point of view. According to data from the 2006 Theoretical and Referential Framework, there has been an increase in the number of obstetric consultations provided by the Unified Health System (SUS) in the 10 to 14, 15 to 19, and 20 to 24 age groups (Sexual Rights, Reproductive Rights and Contraceptive Methods, 2006). According to the IBGE, using data from the National Household Sample Survey (PNAD), 2009, Brazil had almost 80 million children, adolescents, and young people up to the age of 24 (Synthesis of Social Indicators, 2010). In Brazil, around one million teenagers give birth yearly (Silva & Tonete, 2006). According to Belo and Silva (2004), teenage pregnancy can be associated with several factors, including domestic violence, low socioeconomic and schooling levels, as well as a lack of personal life prospects.

Adolescent pregnant women are considered to be at high risk from a clinical, biological, and behavioral point of view. The literature states that this group is subject to complications such as eclampsia, anemia, premature delivery, and the birth of low birth weight babies15. In addition, research on the conceptus of these young mothers suggests that they may be at greater risk of morbidity and infant mortality, as well as developmental delays and psychological problems (Belo & Silva, 2004). For adolescents, unplanned pregnancy can result in emotional, psychological, and social overload, in addition to the obstetric consequences for the fetus, with repercussions on their development and future life plans (Manfré, Queiróz, & Matthes, 2010) and most of them are not prepared to take on this challenge (Moreira, Viana, Queiroz, & Jorge, 2008).

Final considerations

The research data suggests that formal education significantly impacts parenthood planning. More specifically, the research identified a new finding: pregnancies that occur during periods of study - primary, secondary, or higher education - have lower rates of family planning than pregnancies that occur when people are not studying. In this way, the research points to the problem of school pregnancies, which has been addressed in many other studies.

Age appears in the survey as another factor influencing better pregnancy planning. Programs that encourage responsible parenting in Brazil could focus on avoiding early pregnancies. Of course, excessively postponing pregnancy may not be the best measure either, and for this, we recall the warning from researchers linked to the WHO: "It is taken for granted that maternal and child health is adversely affected when pregnancies are 'too early, too late, too many and too close'" (Marston & Cleland, 2004, p. 5).

The difficulty parents and educators have in maintaining a dialog about sexuality with young people and adolescents and in transmitting relevant information about sexuality to them can be seen in the high rates of adolescent pregnancy in Brazil. Teenage pregnancy can, therefore, be found in all social strata. There is a need to broaden the debate with society about the sex education that is intended to be offered in schools.

The norms for the exercise of sexual life have changed; contemporary society has developed methods of controlling fertility, and this has given women greater freedom. It is now necessary for education on parental responsibility to be part of the school curriculum since it is during the school years that pregnancies occur with lower rates of planning, as the research shows.

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