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Determinants of pregnancy in adolescents in Colombia: Explaining the causes of causes.

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Abstract

Objective: The purpose of this research was to perform an analysis of the social determinants with the greatest contribution in the occurrence of pregnancy in adolescence and identify those that increase the level of vulnerability to the risk of pregnancy or maternity in adolescence.

Methods: from the information collected in the 2015 *DHS*, explain the state of pregnancy and maternity in adolescents in Colombia, applying a set of models to estimate the contribution of determinants in the explanation of pregnancy and adolescent motherhood.

Results: The permanence in the educational system and the postponement of the beginning of sexual relations are the main protective factors, while gender stereotypes and cultural patterns that favor gender violence explain an important segment of the risk of pregnancy and motherhood in teenagers

Conclusions: These results identified the determinants that significantly affect the occurrence of pregnancy at early ages, and that are directly related to the lack of opportunities and expectations, school desertion, limited and untimely information about sexuality and gender stereotypes. The implementation of effective actions and measures for its prevention is urgent; therefore, it is necessary to design and implement comprehensive social intervention policies and programs that allow acting on these social determinants from a shared agenda among sectors.

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Introduction

In Colombia, teenage pregnancy is decreasing; according to the results of the National Survey of Demography and Health (ENDS, in Spanish Encuesta Nacional de Demografía y Salud) (1), the decreasing trend of the percentage of women aged 15 to 19 who are already mothers or are pregnant with their first child is confirmed, going from 20.5% in 2005 to 19.5% in 2010 and 17.4% in 2015. Based on birth records in adolescents from 15 to 19 years of age, it is possible to notice how in 2010 there were 147,307 and in 2015, 135,979, meaning that, in five years 11,328 new pregnancies were avoided in women of this age group (2). The decrease in teenage pregnancy was greater in the urban area, in the regions with more opportunities, among the women with the highest educational level and in the 40% of the population with the best social position (according to wealth quintiles). In 2015, the percentage of women aged 13 to 19 who are already mothers or pregnant with their first child in the lowest quintile (20% of the poorest population) is 6 times higher than the percentage in the highest quintile (20% of the richest population), among women with primary education (41.8%) it is five times higher than the percentage of women with higher education (8.0%) (1).

The picture is less encouraging among births in girls of 10-14 years: although the figure is lower, no girl child should be a young mother: according to vital statistics in 2010, 6,315 births were reported, in 2014 it increased to 6,593 and in 2015 it was reduced to 6,045 (2). Likewise, according to the ENDS 2015, 50% of women aged 13 to 49 had their first child before they turned 20 and among them 3% had it before they turned 15 years old. Currently, early motherhood is higher among women who are in the poorest 20% of the population (5.5%), are indigenous and live in compound families (5.1%), live in rural areas (4.8%), or in the Region of the Orinoquía and Amazonía (4.6%), are displaced (4.4%) and, reside in municipalities with direct affectation by the internal armed conflict (3.8%) (1).

Teenage pregnancies do not occur among peers: from the total women aged 13 to 19 who are already mothers, the age of the father of their first child exceeds at least 6 years in 44.6% of cases; in 19.5% of the cases the father was at least 10 years older than the mother, and in 4.6% of the cases the father is 20 years older. In the urban area the age difference is lower compared with the rural area (1). The greatest age differences warn about the abuse of power that undermines the ability to make decisions, to access information and to understand the consequences of one's decisions.

Between 1990 and 2015, the percentage of women aged 15 to 24 years who had their first sexual intercourse before the age of 15 tripled; in 2015, 17% of women aged 13 to 19 had their first sexual intercourse before the age of 14, in 40% of cases with a partner 6 or more years older. In the 2015 ENDS it was found that the percentage of women who had their first child before their 15th birthday went from 1.5% in the group of 45 to 49 years to 9.2% in the group of 15 to 19 years.
According to the timeliness in the delivery and access to information on sexuality, on average, women aged 13 to 49 were 16 when they first accessed sexuality information; women with lower school achievement received information on sexuality for the first time at age 22, while women with higher education received it for the first time at age 15. There is an even greater gap between women who have had more than 3 children, who received information about sexuality for the first time at age 21, and women who have not had children, who received it at age 13 (1).

It should also be mentioned that the highest percentage of women aged 13 to 24 who were teenage mothers (52%) in turn are daughters of women who were teenage mothers. Similarly, the highest percentages who have older sisters who also had children before they turned 18 are in rural areas (46%), Pacific Region (45%) and the poorest 20% of the population (48%) (1). Considering that in the relationship between adolescent pregnancy and poverty other social determinants interact, such as unfavorable socioeconomic conditions, social exclusion and cultural patterns in sexual and reproductive practices that have influenced the lives of girls and adolescent women, and that as a result limit the opportunities for personal fulfillment and own and socially acquired expectations (3). These interrelationships have been widely studied and it has been shown that they constitute the main reproduction mechanisms of the pregnancy cycle in adolescence through the generations (4).

At the same time, in these inequalities there are forced relationships, situations of abuse or violence and intergenerational inequalities towards girls and adolescent women, which can be no longer taken into account in a society with imaginaries that legitimize violence against women. This is in addition to the roles and stereotypes that women must fulfill and that influence control over their lives, their bodies and their decisions in the future. Likewise, teenage pregnancy also has deep consequences for health: it can affect the physical, mental and social health of younger women and continues to be one of the main factors of maternal and infant mortality (5).

Unquestionably, gender inequality persists all around the world, in Colombia every day, women and girls are deprived of fundamental rights and opportunities. Achieving that equality and empowering women and girls requires more energetic efforts, including in legal frameworks, to combat deeply rooted discrimination, which is often a consequence of patriarchal attitudes and the social norms that these entail. The unfinished agenda on sexual and reproductive rights is immense. The Sustainable Development Goals (SDGs) (6), besides having been built on achievements and completing many of the pending tasks of the Millennium Development Goals (ODM), allow some hope of progress in achieving universal access to sexual and reproductive health from a renewed agenda, more inter-sectorally and indivisibly integrated among economic, social and environmental issues.

Although, the SDGs did not explicitly define reducing teenage pregnancy as a universal goal, they did contemplate for the first time to achieve greater gender equality (SDG-5). In particular, the following goals are expected to impact adolescent pregnancy by the year 2030: 5.1 End all forms of discrimination against all women and girls around the world; 5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual exploitation and other types of exploitation; 5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation, and 5.6 Ensure universal access to sexual and reproductive health and rights.

The evidence before this study reveals the relationships of teenage pregnancy with poverty, the level of schooling, the lack of access to contraceptive services and the limited use of sexual and reproductive health information and education, as well as the lack of opportunities and personal fulfillment of girls, boys and adolescents (7), (8), (9), (10). There is a broad consensus on the intersections of these social determinants, that is, poor adolescent women, without access to education and living in sexist and marginalized populations impact on equity and sexual rights and reproductive rights. However, the multidimensional nature of pregnancy in adolescence requires analysis from the model of social determinants, in order to generate evidence to guide policies and intersectoral coordination with shared objectives: prevent adolescent pregnancy and postpone motherhood. Probably, more research is needed to explore the causes of the causes of pregnancy in adolescents, and to decompose the contribution of the social determinants on which action is required from the different levels of government.

This article analyzes the determinants of greater contribution in pregnancy and motherhood in adolescents using the 2015 National Demography and Health Survey, in order to provide evidence and recommendations to act on the determinants from the National Strategy for the Prevention of Adolescent Pregnancy and of the National Sexuality Policy, Sexual and Reproductive Rights. More specifically, the objectives were: first, to analyze adolescent pregnancy and early pregnancy (before the age of 15). Second, to identify the social determinants of greater contribution in pregnancy and motherhood. The discussion focuses on a desirable context for addressing adolescent pregnancy and gaining greater understanding of its social determinants to accelerate the achievement of sustainable development goals by 2030.

Methodology

Study design and data sources

The first objective was addressed through a descriptive analysis of teenage pregnancy and maternity before the age of 15. The second objective was addressed by a set of regression models to estimate the relative importance of each independent variable in the explanation of pregnancy and maternity in adolescence.

Two logistic regression models were estimated, one for 8,526 women aged 13 to 19 years and the other for 831 women aged 13 to 19 married or in free union at the time of the survey. The dependent variable assigns the value

"1" to women who are mothers, are pregnant with the first child or reported a pregnancy that ended in loss and the value "0" to women who have never been pregnant. The data source was the 2015 National Demography and Health Survey, which provides data on sexual and reproductive health and the social determinants for women from 13 to 49 years of age.

Dependent variable

The models were calculated for the dependent variable "pregnancy in adolescence" of adolescents' groups who are already mothers, are pregnant for the first time or experienced an abortion or loss. Given that the dependent variable is dichotomous[1] , a binary logistic model was selected to determine how strong the relationship between the determinants considered and adolescent pregnancy is. The relevance of this relationship is also known as contribution, and it allows identifying the determinants that have an impact on adolescent pregnancy.

Independent variables

These variables were also selected from the 2015 ENDS according to the classification defined by the WHO social determinants model (11), and are considered by Conpes 147[2] (12). These variables were classified according to the WHO model in structural, intermediate (interpersonal intrapersonal) and proximal determinants. Information was taken on life conditions, behaviors, knowledge, attitudes and perceptions of women and men in the different areas in which sexuality manifests itself: study, work reproduction, contraception, nuptiality, sexual behavior, fertility preferences, and couple violence. These variables allowed deepening the knowledge of the vulnerability degree of adolescent women related to pregnancy, as well as monitoring and following up on the effective enjoyment of their sexual and reproductive rights. Knowing the nature of the variables to be considered in the model, the next step was to establish which of them meet the prevalence requirements and number of cases enough to provide relevant information to the models.

Limitations of the study

This study presents some limitations that should be considered. In the first place, since it is a cross-sectional survey, some of the independent variables available refer to the time of the survey and not to the moment of pregnancy in the case of women. Secondly, it is important to mention that the models used do not completely explain all the contributions of determinants in pregnancy and adolescent motherhood, so they can be complemented by exploring other measures or indicators, as well as other statistical methods that were not considered in this study.

Ethical considerations

All analyses were based on publicly available data from the National Survey of Demography and Health (ENDS) 2015, through Profamilia, the Ministry of Health and Social Protection or Demographic Health Survey (DHS). No ethical approval was required for this study.

Results

This section is organized as follows: i) Decomposition of adolescent pregnancy according to social determinants; and ii) contributions of determinants in adolescent pregnancy. The analysis of the determinants of greater contribution was made through three regression models: model for the proximal determinants, model for the structural and intermediate determinants, and model for the determinants of the use of contraceptive methods.

Decomposition of pregnancy in adolescents according to social determinants

Figure 1 presents the structural and intermediate determinants of adolescent pregnancy, and the intermediate determinants related to perceptions of gender and sexual health, and knowledge of the use of contraception methods. Among women aged between 13 and 19, 13.8% have been or are pregnant; the highest levels of teenage pregnancy are found in rural areas (18.6%), within those of the lowest wealth quintile (20.3%), women who migrated in the five years prior to the survey (20.3%), and residents in municipalitiesdirectly affected by the

[1]The variable takes the value "1" for women from 13 to 19 years old who have been pregnant and "0" for those who have not.

[2] CONPES by its initials in Spanish: National Council of Economic and Social Policies

internal armed conflict.

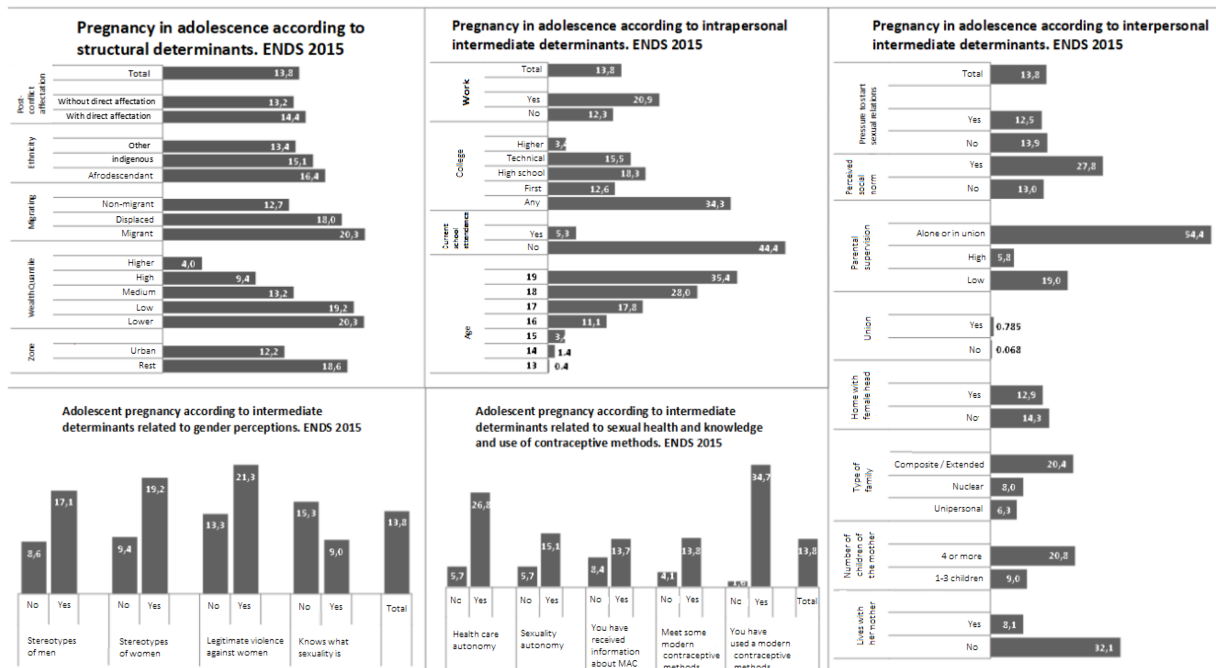

Figure 1. Determinants of pregnancy in adolescence. ENDS 2015.

In turn, for every adolescent who has had a pregnancy and continues to attend an educational institution, there are nine who have dropped out school. In addition, for every adolescent who has had a pregnancy and has passed a year of higher education, there are 11 who have had a pregnancy and did not go to an educational institution. According to age, 0.4% of 13-year-old girls had been or are pregnant. This percentage reaches 3.4% at 15 years old, and it is three times higher between 15 and 16 years. The percentage of adolescents who had been or are pregnant is 12% among those who do not work and reaches 21% among those who do.

Perceptions about attributions to masculinity and femininity have a significant relevance in adolescent pregnancy: the percentage of adolescents who had been or are pregnant is twice as high among those who consider that the active role in sexuality is proper for men[3] and among those who consider that the main role of women is to take care of the home[4]. Likewise, adolescent pregnancy is 13% among those who do not legitimize violence and 21% among those who do legitimize it. On the other hand, among people who know that sexuality is how you see, feel and behave, adolescent pregnancy is 9% while among those who do not have clarity about the concept of sexuality reaches 15%.

Adolescent pregnancy is highly associated with early unions or living outside the home of parents. On the other hand, the higher level of adolescent pregnancy among women who have used some contraceptive method can be explained in part by the initiation of use after the first child, a much more frequent practice among adolescents in rural areas.

At the level of interpersonal intermediate determinants, the highest percentages of adolescent pregnancy were found among those who live alone or in union with their partner (54%), no longer live with their mother (32%), live

[3]Men need more sex than women, men do not talk about sex, they do it or, men are always ready to have sex

[4]Women must take care of the house, cook, take care of children

in compound or extended families (20 %), and in those cases in which the mother has more than four children (21%). In the case of adolescents who still live with their parents, pregnancy is greater among those who have a low level of parental supervision (19%); it is also higher among teenagers whose friends have already started sex life(28%).

Contributions of the determinants of pregnancy in adolescents

Table 1 presents the name of the variable with the evidence of association with the dependent variable in descending order. The continuous variables were: age at the beginning of sexual relations, age at first menstruation, age of interviewed and average years of education.

Table 1. Adolescent pregnancy, association tests for nominal variables. ENDS 2015.

Variable	Statistical Chi-Square	CCP
Had an abortion after 2006	8513.000 ***	0.707
Marital status	3252.040 ***	0.525
Parental supervisión	2188.741 ***	0.452
School Attendance	1852.629 ***	0.422
Current use of modern methods	*** 819.361	0.296
Lives with the mother	752.772***	0.285
Health autonomy	***752.220	0.285
Attitude towards teen pregnancy	659.676***	0.272
Received information on methods in the past year	379.822***	0.207
Family type	***275.267	0.177
Wealth Index	256.135***	0.171
Number of children of the mother	***241.598	0.166
Agrees on women stereotypes	***169.558	0.140
Agrees on men stereotypes	123.930 ***	0.120
Need for information about sexuality	92.650 ***	0.105
Reproductive preferences	** 7,664	0.103
Sexual autonomy	*** 80.066	0.096
Currently working	***72.807	0.092
Residence area	***	0.0

	53.040	79
Knows what sexuality is	50.829***	0.077
Migration Status	48,192 ***	0.075
legitimizes violence against women	25.991***	0.055
Age of beginning of sexual relations	***7,222	0,030
Ethnicity	5,735 *	0,026
Home headed by a woman	3,719 *	0,021
Affectation	2,452	0,017
Pressure to initiate sex	1,216	0,012
Affiliation with social security	1,059	0,011

Independence tests were performed for the variables that could explain the occurrence of pregnancy in adolescents. This procedure allowed establishing a first approximation to the social determinants of greater contribution with the pregnancy in adolescence in Colombia.

Most of the variables examined have a significant association with adolescent pregnancy. Three variables did not show a statistically significant association with adolescent pregnancy: pressure for the initiation of sexual relations, affiliation to the General System of Social Security in Health (SGSSS, by its Spanish name) and the affectation due to the armed conflict. This information allowed specifying the set of variables necessary to construct the models for intermediate, distal and proximal determinants.

a) Model for the proximal determinants

The proximal determinants refer to biological factors such as age at menarche and fertility, and behavioral factors such as early initiation of sexual relations, nuptiality and use of contraception methods. To establish how the proximal determinants affect the probability of having a pregnancy in adolescence, a logistic regression model with a logit link function was adjusted with the variables: nuptiality, use of contraceptive methods, age at menarche and age at sexual initiation. Table 2 presents the estimation of the parameters, the standard errors and the level of significance of each determinant.

Table 2. Models for proximal, intermediate and structural determinants of pregnancy in adolescents. ENDS 2015.

Proximal determinants	**Estimated**	**Standard error**	**Sig**
Intercept	0.73	0.685	
Age at menarche	0.081	0.036	**
Age of initiation of sexual relations	-0.605	0.037	***
Current marital status	2.435	0.107	***
Current use of modern methods	-0.453	0.094	***

Intermediate and structural determinants	Estimation	Standard error	Sig
Intercept	9,850	0,667	
Age	0,541	0.029	***
Zone			
Rural (Ref)			
Urban	-0.269	0.094	***
Migratory status			
Displaced (Ref)			
Migrant	-1.299	0.481	***
Nonmigrant	-0.972	0.471	**
Current school attendance	-1.701	0.086	***
Currently working	-0.223	0.097	**
Lives with her mother	-1.002	0.086	***
Number of children of the mother			
More than 3 children (Ref)			
3 or fewer children	-0.346	0.084	***
Type of family			
Composite and extensive (Ref)			
Nuclear	-0.875	0.087	***
Unipersonal	-3.033	0.725	***
Knows what sexuality is	-0.487	0.105	***
Men Stereotypes	0.231	0.093	**
Women Stereotypes	0.536	0.088	***
Legitimizes violence against women	0.429	0.156	***
Unmet need for methods	0.372	0.082	***

According to the results, it is confirmed that the postponement of the beginning of sexual activity and the use of modern contraceptive methods are protective factors of adolescent pregnancy. Conversely, early unions are the main risk factor for teenage pregnancy.

b) Model for structural and intermediate determinants.

The structural determinants refer to poverty, area of residence, social inequities, power relations, gender stereotypes, social norms and social capital (resources of political and community institutions). Table 2 presents the estimates, standard errors and the level of significance of each variable.

In this model, adolescents' ages are presented as risks factor, and it is possible to confirm this with the descriptive analysis of this variable that shows how the percentage of adolescent pregnancy increases significantly in each year of age. The results of the model expose life in rural areas and displacement due to armed conflict as risk factors for

teenage pregnancy. The area of residence (urban or rural) in which the adolescent lives and her migratory status: if she has lived in the same municipality for more than 5 years, was displaced by internal armed conflict or migrated for different reasons, also largely determine the occurrence of teenage pregnancy.

At the structural level, the determinant that largely explains adolescent pregnancy is poverty: an inequitable distribution of wealth determines to a large extent the indicators of adolescent pregnancy. The area of residence, migration, ethnicity and displacement also contribute decisively in the explanation of adolescent pregnancy. At the level of intermediate determinants, age and attending school activities determine to a large extent whether or not pregnancy occurs during adolescence. Girls and young women with school dropout have a high probability of having a pregnancy in adolescence. Another part of pregnancy in adolescence can be explained from determinants such as work, stereotypes of men and women, attitudes that legitimize violence against women and knowledge about sexuality. Finally, determinants such as unmet needs in contraceptive methods, sexual autonomy, desire for pregnancy, autonomy over health care and knowledge of contraception methods contribute to a lesser extent with teenage pregnancy.

In the same way, the intermediate determinants found in this model correspond to those associated with the knowledge and perceptions that adolescents have about sexuality, gender stereotypes and violence against women. The first variable is associated with teenagers' definition of sexuality. The results of this model show that considering sexuality as the way one sees, feels and behaves is a protective factor for teenage pregnancy. Regarding gender stereotypes, not agreeing with stereotypes of men or stereotypes of women represents a protective factor. Similarly, adolescents who legitimize violence against women are at greater risk of adolescent pregnancy than those who do not legitimize it. Figure 2 presents the size of the contribution of structural and intermediate determinants in adolescent pregnancy, in Colombia.

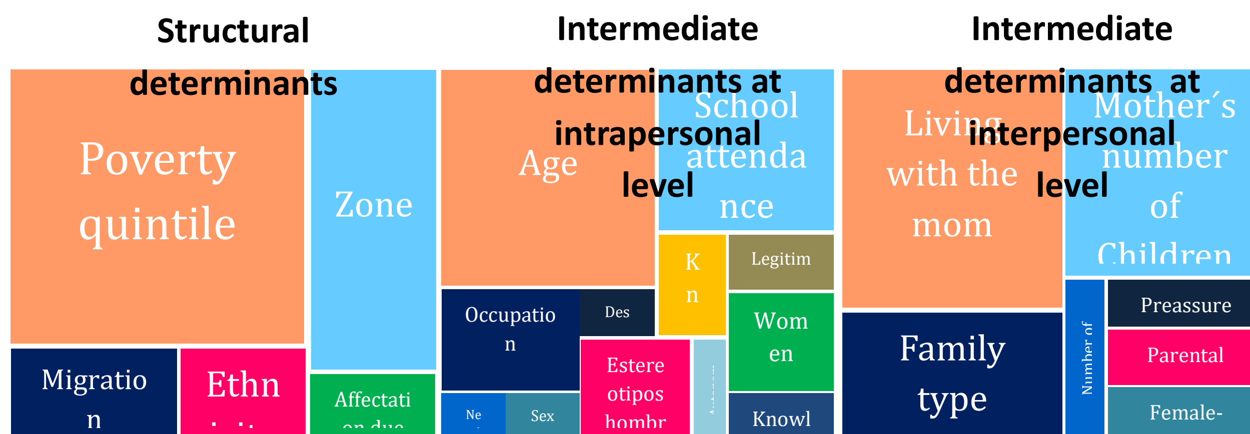

Figure 2. Contribution of social determinants to pregnancy in adolescence, in Colombia. ENDSs 2015

At the interpersonal level, living with the mother, the number of mother's children, and the type of family, in other words,, have as a favorable environment to adolescent pregnancy a determining role in its occurrence. Finally, preferences on the number of children desired by the couple, pressure to initiate sexual relations, parental supervision and female headship at home also contribute by explaining the problem of adolescent pregnancy from the perspective of interpersonal preferences. Additionally, the results show that the fact of not living with the mother represents a risk factor for the adolescent (or that the pregnancy produces the abandonment of the maternal home). Similarly, living in compound and extended homes is associated with an increased risk of pregnancy for a woman between 13 and 19 years of age, this is explained by the fact that adolescents must join a larger family group once they know they are pregnant. Finally, a mother with more than three children also constitutes a risk factor for the adolescent.

c) Model for the determinants of the use of contraceptive methods

Table 3 presents the determinants that are associated with the use of modern methods. Older adolescents, those who are currently together, those who are or have been pregnant and those who are working are more likely to use modern methods of contraception. On the other hand, using a modern contraceptive method does not vary among adolescents living in nuclear or compound and extended families; while there is a significant association among those who live in single-person households. Ethnicity is also relevant: while there is no significant difference in the probability of using modern methods among women who do not belong to any ethnic group, and afro-descendants, the probability of using a modern method in indigenous women is very low.

Likewise, autonomy over decision-making plays a determining role: adolescents who do not enjoy autonomy in making decisions about their health and sexuality are associated with lower probabilities of using modern methods of contraception. Finally, the perception that they have on topics related to sexuality is also determinant of the use of modern contraceptives. Adolescents who disagree with the delivery of condoms to young people from 12 to 14 years old as part of an educational process for sexuality and those who do not agree with teaching children between 12 and 14 years old about how to use a condom to avoid becoming infected with the virus that causes AIDS are less likely to use a modern method of contraception.

Table 3. Determinants model of of the use of modern contraceptive methods.

Determinant	Estimation	Standard error	Sig
Intercept	6,296	0,393	
Age	0.390	0.021	***
Marital status	1.039	0.107	***
Teen Pregnancy	0.474	0.095	***
Currently working	0.355	0.075	***
Family type			
Composite and extensive (Ref)			
Nuclear	-0.026	0.064	
Unipersonal	1.092	0.331	***
Ethnicity			
None (ref)			
Indigenous	-0.460	0.152	***
Afro-descendant	0.109	0.108	
Knowledge of access methods in EPS	0.685	0.064	***
Autonomy for health care	0.178	0.068	***
Sexual autonomy	1.091	0.147	***
Agreement with delivering condoms to adolescents aged 10 to 14 years	0.280	0.079	***
Agreement with teaching children from 12 to 14 about the use of condoms for the prevention of the AIDS virus	**0.346**	**0.135**	***

Discussion and conclusions

In Colombia, pregnancy and motherhood in adolescence are largely explained by the lack of opportunities (being poor, limited access to resources, living in socially marginalized communities), school dropouts, limited and untimely information about sexuality, and gender stereotypes. It's important to highlight how adolescent pregnancy can be explained from the structural determinants of poverty and the area of residence in 80%. On the other hand, at the level of intermediate determinants (at the intrapersonal level), school non-attendance and gender stereotypes explain more than 60% of early pregnancies in Colombia. Finally, not living with the mother, the number of children of the mother and the type of family explains interpersonally 75% of early pregnancies. These

results send a message of urgency and need to act in order to impact the determinants of greater contribution in the occurrence of pregnancy and motherhood in adolescence such as social inequities, lack of opportunities and gender stereotypes.

As for the pregnancy and maternity in adolescence, it is confirmed that among the proximal determinants, the postponement of the beginning of sexual activity and the use of modern contraceptive methods, constitute the most important protective factors of early pregnancy unlike the early unions that constitute the main risk factor. Among the intermediate and structural determinants, the permanence in school is the main protective factor of adolescent pregnancy. The main risk factors are, in order: having preconceptions about the role of women, legitimizing violence against women, having unmet needs for information about sexuality and having stereotypes about the role of men.

Similarly, the perception of timely access to information on contraception, considering that education for sexuality promotes respect for all people regardless of gender, or sexual orientation, as well as school attendance and working, are definitely the determinants of greater contribution in the reduction of pregnancy among adolescents currently united. On the other hand, considering that people should only start talking about contraception when they start having sex, the early start of sexual relations and the unmet need for information and education about sexuality, as well as having suffered abuse during childhood are the determinants of early pregnancy among adolescents who are currently united.

The determinants of the use of contraceptive methods in their order are: age, being currently united, being or having been pregnant, working and living in a single-person home. On the other hand, adolescents who are indigenous, those who do not enjoy autonomy to make decisions about their health and sexuality, those who disagree with the delivery of condoms to adolescents and young people from 12 to 14 years old as part of a educational process for sexuality, and those who do not agree with teaching children between 12 and 14 years old how to use a condom to avoid becoming infected with the virus that causes AIDS, are less likely to use a modern contraceptive method, that is, they resist contraception methods among young people.

To conclude, gender stereotypes, structurally and profoundly affect how girls and young women access their sexual and reproductive rights, have control over their lives and take advantage of opportunities to fulfill themselves as humans. According to the approach of Roberta Cook (13), "*a stereotype is a generalized view or a preconception about the attributes or characteristics of the members of a particular group or about the roles that such members must fulfill, [...] it does not matter if these attributes or characteristics are or are not common to the people that make up the group or if their members do or do not have such roles. [...] Insofar as they ignore the needs, abilities, circumstances and individual desires, these generate a significant impact on the ability of people to create or form their own identities according to their values and desires* ".

The socialization of gender and gender stereotypes, constitutes a cultural learning process of the roles assigned to each person according to their sex, which starts from pregnancy when different expectations are expressed depending on the gender of the child; during early childhood, boys and girls learn the differences that exist through the differentiated treatment and attention they receive from the members of their family and social environment (14). It continues throughout life but early adolescence (between 10 and 14 years old) is a critical moment in which the preconceived notions about the roles and behaviors that must be adopted by men and women are intensified: they change their own expectations and those of others about the gender roles that one had during childhood (15).

In early adolescence, norms and attitudes that generate gender-based inequalities are reinforced by peers and parents; among their peers, adolescents find emotional support as well as social protection but also control and pressure to comply with prevailing gender norms, through teasing, intimidation and social exclusion. Early adolescence also brings a decrease in social tolerance for friendships of the opposite sex, caused by the fear of parents at the beginning of sexual relations as well as strong pressure for their children to assume roles that conform to gender norms prevalent in their culture that protect the reputation of their children and families from the "damage" that would produce unconventional behavior. At the same time, social and mass media, which

facilitate the communication of adolescents through social networks and text messages, are also being used to transmit messages that reflect unequal gender attitudes as well as cyberbullying (15). These inequities in gender are also reinforced by the government when policies are designed, implemented and evaluated that do not place girls and women in the center, and that do not consider gender approaches properly.

Depending on the social context in which they are found and the processes of adaptation that they live, adolescents may develop patterns of behavior that will have long-lasting positive or negative effects on their future health and well-being, such as consumption or non-use of drugs or alcohol, or postponement of sexual relations, the adoption of risky behaviors or the use of protection in relation to sexual practices (16, 17, 18).

The determinants that significantly influence the occurrence of pregnancy at an early age were identified and are directly related to the lack of opportunities and expectations such as school desertion, limited and untimely information about sexuality and gender stereotypes. The implementation of effective actions and measures for its prevention is urgent; therefore, it is necessary to design and implement comprehensive social intervention policies and programs that allow acting on these social determinants from a shared agenda among sectors.

It is hoped that these findings inform policy debates on strategies to reduce adolescent pregnancy and early motherhood, and show the importance of designing policies to act on their social determinants with shared objectives among government sectors. For example, through interventions to prevent gender-based abuse or violence against girls and adolescent girls; comprehensive sexuality education programs from six years of age to ensure inter-generational social transformations and health and social assistance services focused on the needs, identities and circumstances of younger women. This new direction will help Colombia to achieve substantial progress in SDG-3 (Universal health) and SDG-5 (Gender equity). In particular, it would be ideal for the country to reduce adolescent pregnancy by 2030 notably. Many countries have achieved this with opportunities and by eliminating gender stereotypes.

Finally, it is necessary to highlight the potential of the DHS in Colombia to carry out this type of analysis. The survey provided information related to the following determinants: poverty, displacement, area, ethnicity, type of family, initiation of sexual relations, couple's age, nuptiality patterns, access to information on sexuality and sexual and reproductive rights, access to services in sexual health and reproductive health, perception of gender roles and stereotypes, and gender violence.

In conclusion, Colombia has made progress in reducing adolescent pregnancy and early motherhood. However, this progress could be accelerated if decision-makers and policy makers achieve a unique combination of improvements in the social determinants of health, the adoption of sustained cross-sectoral and health programs and enlargement of best practice evidencing. The next step would be to improve inter-sectoral coordination within the framework of the National Policy on Sexuality and Sexual and Reproductive Rights, especially during sensitive moments in the adolescents' life courses particularly among girls between 10 and 14 years of age.

Recommendations

Based on the results of the study, it was possible to identify five strategies:

a) To reinforce and implement laws that protect underage girls. It is important to bear in mind that the determination of the legal minimum age for sexual consent, set forth in Law 599 of 2000 and articles 208 and 209 of the Criminal Code, offers greater protection against sexual abuse of minors. However, they are not enough to avoid sexual abuse, gender stereotypes and gender violence, so other measures that reinforce the regulations are necessary, as well as the effective implementation of educational initiatives such as the Program for Sexual Education and the Construction of Citizenship and the incorporation of comprehensive social intervention programs. These tools, which must be evaluated according to their effectiveness, should promote and facilitate changes in the norms, favorable practices to gender equity since early adolescence, the construction of egalitarian relationships and the valuation of relationships between peers.

b) To eliminate gender stereotypes. It is urgent to reinforce investment in strategies and programs aimed to strengthening sex education with a gender focus from early ages. This can undoubtedly represent changes in the attitudes of future generations, which will ultimately be reflected in the reduction of teenage pregnancy, social inequalities and social exclusion, particularly among girls and younger women. For example, it is worth reviewing two models oriented in this sense. The first one, developed in Bogotá through the curricular integration of sexual citizenship and the differential and gender approaches, reduced adolescent pregnancy (19). The second model is the Global Early Adolescent Study (15) that investigated, among adolescents aged 10 to 14 from eight countries, what the process of gender socialization is, how gender is formed, norms and attitudes related to sexuality, how these norms and attitudes shape the trajectories of health when one goes from adolescence into adulthood and, what the appropriate measures and methods to investigate these issues are.

c) To build safe environments for children 10 to 14 years of age. From the identification of the needs and interests of adolescents who take into account their cognitive abilities it is possible to: develop reflective processes that generate knowledge and appropriation of human, sexual and reproductive rights; likewise, encourage open discussions about gender norms and attitudes, develop pedagogical and didactic processes, and stimulate critical reflection to change attitudes and norms within peer groups. It has been documented how the construction of comprehensive and respectful environments for women and people with diverse sexualities is a mechanism to reduce teenage pregnancy and strengthen the routes of attention to sexual and gender-based violence. Additionally, the support of inclusive services, that is, without barriers and with differential attention and adaptation to the needs of children and adolescents, contributes significantly to this construction. It is necessary to sensitize the actors who are in the day to day of adolescents about the damage caused by gender stereotypes so that in turn they can foster safe environments that allow adolescents to achieve the maximum potential when they have the opportunity to choose, as well as more control over their life.

d) To recognize the high potential of technology and communication to build society. Societies are their communication, therefore wherever communication fails, doubts and uncertainties are created, which in addition reinforces inequalities, negatively impact the development of children in sensitive moments of the course of life: specially when they move from childhood to adolescence (10-14 years old). Both technology and communication processes play a decisive role in supporting previous strategies: reinforce norms, induce changes in attitudes and build safe environments for adolescents.

5) To strengthen inter-sectoral coordination and create synergies among economic sources to amplify the impact of interventions through shared objectives. The only way to act on the structural determinants of pregnancy in adolescents is through collective and interconnected work among sectoral programs focused on reducing inequalities. This requires expanding and strengthening inter-sectoral actions in order to achieve the goals of the Ten-Year Public Health Plan PDSP-2012-2021, the National Policy on Sexual and Reproductive Health and Rights, and the related Sustainable Development Goals. To illustrate better, sectors such as Education, Culture, National Planning, Social Assistance (such as the Agency for the Overcoming of Poverty), the Council for Gender Equity, Sports and Recreation, as well as Culture and Environment, can contribute significantly to the reduction of pregnancy in adolescents when they coordinate actions and investments that benefit girls, boys and younger women. However, inter-sectoral action must work to guarantee the permanence of the young population in the educational system from all dimensions.

Finally, we hope that this study provides evidence for debates, policies and strategies aimed at increasing opportunities for girls, boys and adolescents, eliminating gender stereotypes and promoting school retention, all of them efficient mechanisms in addressing this problem.

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