



**PREVALENCE OF FACTORS ASSOCIATED WITH PREGNANCY IN PRIMIPAROUS ADOLESCENTS**

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**ABSTRACT**

The investigation determined the individual, cultural, familial, and obstetric factors associated with pregnancy in adolescent primiparous. Material and Methods: quantitative, cross-sectional descriptive study, in 168 primiparas between 13 and 19 years old who attended prenatal consultation in twelve health centers in Chilpancingo, Guerrero, Mexico, each participant with their legal representatives and with informed consent. Statistical analysis was based on chi-square distribution to investigate the association between variables, SPSS Version 20 was used. Results: information on the factors that prevail in the occurrence of pregnancies in adolescents: beginning of sexual life at an early age, nonuse, or misuse of contraceptive methods and mother and / or sister with family history of pregnancy in adolescents. Conclusions: individual and family, cultural, and obstetrical factors are determinants of adolescent pregnancy.

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**INTRODUCTION**

It is called adolescence pregnancy that occurs during the adolescence of the mother, in the period of time between 10 and 19 years. It is also often referred to as early pregnancy, given that it occurs before the mother has reached sufficient emotional and physical maturity to take on the complex task of motherhood. (WHO, 2012)

In developing countries, according to the World Youth Report (2005), one out of every six births corresponds to 15-19 year olds and represents 17% (14 million births per year worldwide). Each year, more than 4.4 million adolescents undergo abortion; of these 40% are made in poor conditions. At the national level (Mexico) there were 457,929 births of mothers under the age of 20, representing 17.40% of births in that year. (INEGI, 2010).

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In the state of Guerrero, 0.42% of births are for mothers under 15 years of age and mothers who give birth between 15 and 19 years old represent 16.42% of INEGI (2010). This scenario behaves in a similar way in the three areas, global, national and state. The National Survey on the Demographic Dynamics of Mexico, ENADID (2009), 15-year pregnant adolescents represent 19.1% of women of reproductive age. In the state of Guerrero the number of children under 15 years is 1 million 125,071 girls, representing 33.2% of the total population of Guerrero (3 million 388 thousand 768 people). 7 out of 10 (72.6%) had at least one child born alive. 408 girls aged 12 to 14 who experienced motherhood were reported; Approximately 800 births per year are recorded where the mother is less than 15 years old. (INEGI, 2010). Research shows that there are a considerable number of pregnant students who assume the roles and responsibilities of adults at an early age, including being mothers. Early pregnancy is largely a product of lack or misinformation about sexuality,

## Prevalence Of Factors Associated With Pregnancy In Primiparous Adolescents

reproduction, and contraceptive methods (Alica, 2007), (Morales, 2008), (Barrera *et al*, 2005) (Barrera *et al*, 2008).

At the moment this problem is of great importance, with the increase of pregnancies in adolescents, it is important to identify the associated factors that are presented in the adolescents, the results of this research will be useful to elaborate a program of educational intervention on health and Sexuality, to reduce the risk of adolescence pregnancies since this problem has been increased and affecting the academic, psychological, social and physical education of adolescents.

This study aimed to determine the prevalence of associated factors that influence the pregnancy of primiparous adolescents who go to prenatal control in 12 health centers located in the City of Chilpancingo Guerrero. Mexico.

### METHODOLOGY

It consisted of quantitative research, with descriptive cross-sectional design. The total study population was 298 primiparous adolescents, who attended their prenatal control in 12 health centers in the city of Chilpancingo, Guerrero Mexico. The design was stratified random sampling with allocation proportional to stratum size, with 95% confidence with a margin of error of 0.05 obtaining a sample of 168 pregnant adolescents. Adolescents 14 to 19 years of age, primiparas were included, that they do not present physical, mental illnesses or any condition that hinders verbal communication and they agree to participate voluntarily, together with their legal representative and with informed consent. The SPSS Version 20 statistical package was used to process the data and to perform the analysis. Statistical analysis describes proportions (prevalence), mean, the CHI-square test was used to investigate the association between variables.

### RESULTS

We describe the data provided by 168 primiparous adolescents with ages between 13 and 19 years, the average age was 16.9 years, for the results and bivariate analysis was classified to pregnant adolescents primiparas according to stages of adolescence, Classifying two types: pregnant women in early adolescence-average 66 (39.3%) and pregnant women in late adolescence 102 (60.7%). Because in each of these groups changes are made in the physical, emotional, social, moral, as well as personality development in the individual and as Barrozo (2011) points out is a stage for the onset of puberty, parental independence, Identity search and the development of cognitive processes. As teens experience these changes, they can try out many risk behaviors among which sexual activity is found. As for the general characteristics, we observed that the pregnant primiparous adolescents came from the central region 55.4%, housework 49.4%, free union 46.4%, share the domicile with their parents, 75.5% manifest they live with their partner, only 21.2% live with their parents.

Regarding cultural factors, their schooling at the time of pregnancy is observed, attended primary 10.7%, secondary 50.6%, high school 35.1%. At present they do not study 61.9%, 38.7% said they will not continue studying when their babies are born, 54.8% consider it difficult to have children during their studies. Adolescent pregnancy brings with it other unfavorable consequences from cultural factors, interrupting or modifying educational projects, we observe that the adolescent mother is forced to suspend her education and 19.4% was working to give economic support to her partner or family.

**Table 2** Cultural factors of the pregnant teenager primipara

Cultural factors	Total	Pregnant in middle	Pregnant in late
		adolescence (14 to 16 years)	adolescence (17 to 19 years)
Schoolship: secondary	50,6%	78,8%	32,4%
Want to follow: yes	61,3%	48,5%	69,6%
You are currently studying:			
No	61,9%	72,7%	54,9%

It reported on the individual factor, 60.7% started active sexual life (IVSA) between 14 to 16 years, while 10.1% at 13 years, and the average age was 16.9 years. As for sexual partners that the primiparous adolescents mentioned having, 76.8% indicated one, 15.5% two couples, with a maximum of five partners. In the vast majority of pregnant adolescents a monogamous relationship is observed, it is inferred that sexual activity in adolescents is probably much more frequent than has been pointed out, unfortunately due to the lack of social acceptance little is said. Of the population surveyed answered the 2.4% who sometimes used drugs at the time of having sex. 38.1% mentioned that they ingested alcohol sometimes at the time of having sex.

Reasons that led to sexual intercourse to pregnant adolescents, manifested by their own decision 46.4%, secondly for romantic love 31.5%. In addition to physical attraction and rebellion is presented in the same percentage 6.0%. As for the causes of pregnancy, the 41.1% pointed out that it was their own decision to become pregnant, 31.5% did not use contraceptive methods, 22.6% used the improperly contraceptive methods, of these 8.9% condom use, 6.5% birth control pills, and 3.6% the emergency tablet. 50% did not receive information about sexual orientation in their home. Pregnant adolescents reported that 45.8% did not use any contraceptive method at their first sexual intercourse. 77.4% had unprotected intercourse and 12.5% contracted vaginal infection.

**Table 1** General characteristics of pregnant primiparous adolescents

Characteristics	Total	Pregnant in middle adolescence (14 to 16 years)	Pregnant in late adolescence (17 to 19 years)
Origin: Center	55,4%	57,6%	53,9%
Occupation: Housewife	49,4%	60,6%	42,2%
Marital status: Union free	46,4%	56,1%	40,2%
With whom shares their address:		21,2%	75,5%
		Withtheirparents	Withcouple

**Table 3** Individual factors on sexual and reproductive behavior of adolescents.

Sexual and Reproductive Behavior	Total	Pregnant in middle adolescence (14 to 16 years)	Pregnant in late adolescence (17 to 19 years)
Beginning of sexual life: between the ages of 14 and 16	60,7%	77,3%	50,0%
Number of sexual partners from the beginning RS:		a partner	Two partners
You used contraception in your first sexual relationship: yes	54,2%	54,5%	53,9%
What contraceptive you used: Condom	87,3%	88,2%	86,7%
Reason for having sex: own decision	46,4%	30,3%	56,9%
Cause of your pregnancy: No use of contraceptives	53,5%	68,2%	44,1%
Did you ever SR without protection	77,4%	66,7%	84,3%

Regarding the Family Factor, they had a history of being a single mother in their family, 33.3% answered their aunt, 25.6% mentioned that no one in their family was, and 14.3%, their mother and sister respectively were single mothers. 60.1% said that the family relationship is good, and 31.5% regular. 85.1% received moral support and acceptance by the family. 41.7% of their mothers were pregnant during adolescence and 13.7% did not have relatives with pregnant women in their adolescence. In addition, 45.2% always received financial support and 52.4% of adolescents perceive to have a home in regular conditions.

It was performed bivariate analysis to determine the risk factors associated with the type of pregnant we applied the CHI-square test of Pearson, the results are shown in Table 6, all factors were determined at a significance level of 5%.

It was also determined the relative risk between type of pregnancy and the variable received information about sexual orientation, the value of this was 2.5 for those who did receive the information and .83 for those who did not receive information, in this case the information serves to get pregnant in early adolescence.

**Table 4** Family factors of the adolescent pregnant primiparous

Family factors	Total	Pregnant in middle adolescence (14 to 16 years)	Pregnant in late adolescence (17 to 19 years)
Family history of pregnancy in adolescence: Mother	41,7%	37,9%	44,1%
Those of your family is single mother: Aunt	33,3%	36,4%	31,4%
State of coexistence of parents: Good	60,1%	47,0%	68,6%
In your home you will be informed about sexual orientation: yes	50%	34,8%	59,8%

Regarding the obstetric factor, 78.0% of the population surveyed did not become pregnant at the first sexual intercourse, whereas 22.0% were pregnant. 57.1% of them are between 27 and 40 weeks of gestation. 23.8% attended 2 consultations, 18.5% attended 4 consultations. 11.31% attended 5 prenatal consultations. The delay to the prenatal care service is due to concealment of her condition as a teenager for fear of the reaction of parents, family and group of friends. 97.0% of the pregnant adolescents received information about contraceptive methods. However, when they indicated who gave them the information, 31.5% did not respond, 16.7% received it at their school and consulted the Internet, 13.7 % of friends. 56.5% used some form of contraception before pregnancy. 58.9% used a condom as a contraceptive method, in 2 ° Place the 16.4% oral method and 11% the emergency pill. Regarding the solution to the pregnancy, 72.6% answered that they decided to have their baby, 22.6% had the intention to abort it and 4.2% thought about giving it up for adoption.

That is to say; the estimate indicates a risk in adolescents to become pregnant twice as much in the early adolescence as those who receive sexual information than among those who do not.

**DISCUSSION**

When analyzing the data provided by 168 pregnant primiparous adolescents, it is important to note that more than one third of the primiparous adolescents 39.3% were under 16 years of age. Adolescent motherhood is considered a public problem in Mexico, mainly from two analytical positions; first as a public health problem, since it has been documented that early motherhood represents a greater risk for the mother and her product, both during pregnancy and childbirth. This is due to the fact that at the global level, difficulties during pregnancy and childbirth are the second cause of death among adolescent women aged 15 to 19 years, while babies of mothers under 20 years face a 50% higher chance of mortality

**Table 5** Obstetric factors of the pregnant adolescent primipara

Obstetric factors	Total	Pregnant in middle adolescence (14 to 16 years)	Pregnant in late adolescence (17 to 19 years)
You became pregnant on your first sexual intercourse: No	78%	68,2%	84,3%
Gestation time:		51,5%	64,7%
Number of prenatal controls: 1-4	70,2%	Secondquarter	Thirdtrimester
Intension to becomepregnant		80,3%	63,7%
Receivedcontraceptiveinformation: Yes	97%	42,4%	90,2%
Whoinformedaboutcontraceptives		Abort	Haveit
You used contraception before your pregnancy: No	56,5%	97%	97,1%
		19,7%	15,7%
		Friends	Internet
		60,6%	53,9%

**Table 6** Association of Variables with the Type of Adolescence

Variables	CHI-Square of Pearson
Level of schooling	.000
Civil status	.000
Occupation	.023
Beginning of sexual life	.000
Received sexual orientation information	.002
Family support	.013
Cause of pregnancy	.001
Relationship with parents	.030
Pregnancy in the first sexual relation	.014

Prenatal or dying in the first weeks of life, than babies of women aged 20 to 29 years. Also, newborn babies of adolescent mothers are more likely to register low birth weight, coupled with the subsequent risk of having long-term complications. In this sense, the younger the mother be, the greater will be the risk for the baby (WHO, 2014).

Another variable studied initiation of active sexual life (IASL) is managed as an indicator to capture the precocity of exposure to risk of adolescent pregnancy, The primiparas recorded an average age of 16.9 years for IASL (Table 3), in the study conducted by Blanco *et al* (2015) the primiparas recorded a mean age of less than 14.6 years of age for IASL, the National Health Survey And Nutrition (ENSANUT), held in Mexico in 2012, Reported, the percentage of adolescents 12 to 19 years of age who had IASL reached 23%, primiparas under study reached 60.7% IVSA between the ages of 14 and 16, in addition to ENSANUT (2012), has been observing an increase in the age of the first sexual relation from 15% in 2006 to 23% in 2012. The onset of sexual life is a crucial event of individuals because it has implications for the future life that implies assuming new roles and patterns of behavior that will have effects on their sexual and reproductive health that will modify their development during adulthood. (WHO, 2012).

On the other hand, it was observed that five out of ten dropped out of secondary school (table 2), ENADID (2014) reports that women of childbearing age who were mothers in adolescence, 42.7% did not finish high school, and only 5.0% have professional studies, a percentage that marks a serious disadvantage compared to 24.8% of women who were mothers after the age of 19 and who were able to access higher education.

Regarding the use of contraceptive methods, it is notable the percentage of pregnant adolescents who showed 53.5% not using any type of contraceptive (Table 3), Blanco *et al* (2015) indicates that 65% of pregnant adolescents do not use any contraceptive method, in addressing this issue, it is important to point out where they obtain information on the use of contraceptive methods, 31.5% did not answer, Internet and school 16.7% respectively and friends 13.7% (Table 5). González, Q. *et al.*, (2012). Mention 37% of young people have never talked about family planning with their parents, contrary to the results of Acosta & Gastelo (2012) reports that 18% have received information in their family.

The 50% of pregnant primiparous adolescents received sexual information, contrary to what Cueva *et al* (2005) points out in pregnant adolescents treated in Acapulco Guerrero, Mexico, 69% did not obtain adequate information. In addressing these issues, there are innumerable elements associated with the use

of contraceptive methods, these are concentrated mainly around economic, cultural and social behaviors, as well as institutional barriers or for fear that their parents discover that they use contraceptive methods.

Regarding the obstetrical factors of the total number of pregnant adolescents in the study, 57.1% were in the third trimester of pregnancy, 18.5% attended 4 prenatal check-ups and, in a higher proportion, 23.8% attended 2 prenatal consultations. Alica (2009) reports that 55% of pregnant adolescents were in the third trimester of pregnancy, with 4 prenatal controls 60%. Hernández (2016) observed that 38% of pregnant adolescents were in the late adolescence and were in the third trimester of pregnancy, with 6 prenatal consultations on average. I consider that many pregnant adolescents priviled themselves of prenatal control during the first stage of pregnancy, for not daring to confess to their parents who are pregnant until after a few months, which is why they start belatedly their prenatal control. Regarding the state of coexistence of parents 60.1% said that it is good. In contrast, Alarcón, *et al.* (2007) points out that 66% do not have an adequate family relationship with parents, the family relationship is important as one of the associated factors of adolescent pregnancy. (See Table 6). On the other hand, 54% of the parents have low schooling, we agree with Cueva *et al* (2005), 50% say that the parents had low level of schooling.

## CONCLUSIONS

The onset of sexual life of pregnant primiparous adolescents occurs in conditions of high risk, it is evident the non-use of contraceptive methods in the sexual relations, due to the shortage of information on contraceptive methods, is a consequence of the absence or little sexual information in the schools, in their homes of this group of pregnant teenagers under study and finally to the behavior of which they do not get pregnant in the first sexual relation.

Undoubtedly, the factors associated with pregnancy are cultural, obstetrical, individual, family, sex education, according to the results of the association of variables in this research.

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