Ciencia Latina Revista Científica Multidisciplinar, Ciudad de México, México.
ISSN 2707-2207 / ISSN 2707-2215 (en línea), septiembre-octubre 2025,
Volumen 9, Número 5.

https://doi.org/10.37811/cl_rcm.v9i5

RISK FACTORS INFLUENCING PREGNANCY AMONG ADOLESCENTS TREATED AT A MATERNAL AND CHILD HOSPITAL IN GUERRERO, MEXICO

FACTORES DE RIESGO QUE INFLUYEN EN EL EMBARAZO EN ADOLESCENTES ATENDIDAS EN UN HOSPITAL MATERNOINFANTIL DE GUERRERO, MÉXICO

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DOI: https://doi.org/10.37811/cl_rcm.v9i5.21235

Risk Factors Influencing Pregnancy Among Adolescents Treated at a Maternal and Child Hospital in Guerrero, Mexico

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ABSTRACT

Introduction: Teenage pregnancy is a multifactorial problem, with a high risk of complications for the mother, fetus and newborn. Guerrero ranks second in teenage pregnancies, with more than 3,000 cases in women under 19 years of age. Objective: To determine the risk factors that influence pregnancy in adolescents treated at a maternal and child hospital. Methodology: Quantitative research, cross-sectional descriptive design, 120 pregnant adolescents attending the hospital were interviewed, a validated instrument was used to determine the factors that influenced their pregnancy. Results: The most frequent age was 17 years (27%), 52% report being in a free union, the most frequent age of onset of sexual life is 17 years (29%). 32% have a partner between 20 and 23 years of age, 62% have a history of teenage pregnancy in their family, 71% have knowledge about family planning methods, 76% did not use any family planning method during their first sexual intercourse. Conclusion: The factors that influence teenage pregnancy are: personal (age, marital status and education), family (relationship with the family, history of teenage pregnancy in the family) and sociocultural (conversations about sexuality, knowledge about contraceptive methods and use in the first sexual relationship)

***Keywords*:** adolescent pregnancy, risk factors, sex life

Factores de Riesgo que Influyen en el Embarazo en Adolescentes Atendidas en un Hospital Maternoinfantil de Guerrero, México

RESUMEN

Introducción: El embarazo en la adolescencia es un problema de origen multifactorial, con alto riesgo de complicaciones para la madre, el feto y el neonato. Guerrero ocupa el segundo lugar en embarazos adolescentes, más de 3000 casos de menores de 19 años Objetivo: Determinar los factores de riesgo que influyen en el embarazo de adolescentes atendidas en un hospital materno infantil. Metodología: Investigación cuantitativa, diseño descriptivo transversal, se entrevistaron 120 adolescentes embarazadas que asisten al hospital, se utilizó un instrumento validado para determinar los factores que influyeron en su embarazo. Resultados: La edad más frecuente fue 17 años (27%), el 52% refieren estar en unión libre, la edad más frecuente de inicio de vida sexual es de 17 años (29%). El 32%, tiene de 20 a 23 años de edad su pareja, 62% presentan antecedentes de embarazo adolescente en su familia, 71% tienen conocimientos sobre métodos de planificación familiar, 76% no utilizaron ningún método de planificación familiar durante su primera relación sexual. Conclusión: Los factores que influyen en el embarazo adolescente son: personales (edad, estado civil y escolaridad), familiares (relación con la familia, antecedentes de embarazo adolescente en la familia) y socioculturales (conversaciones sobre sexualidad, conocimientos sobre métodos anticonceptivos y uso en la primera relación sexual)

Palabras clave: embarazo adolescente, factores de riesgo, vida sexual

Artículo recibido 25 setiembre 2025
Aceptado para publicación: 25 octubre 2025

INTRODUCTION

Teenage pregnancy is a multifactorial problem with a high risk of complications for the mother, fetus, and newborn. Adolescents begin their sexual lives at an early age; studies indicate that they start at an average age of 13-16 years (Rodríguez M, 2018). Unprotected sex makes them vulnerable to risky situations such as unwanted pregnancies and sexually transmitted infections (STIs) (Librado et al., 2024).

Understanding the significant impact of teenage pregnancy on society is crucial, as it is a multifactorial social phenomenon. Teenage pregnancy not only affects the health of adolescents and their children, but also their opportunities to continue their education, their life plans, and their social and cultural relationships, among other aspects.

According to the Pan American Health Organization (PAHO) in 2020, "approximately 18 million adolescents become pregnant worldwide each year," and the fertility rate is "46 births per 1,000 girls; however, in Latin America and the Caribbean, it is 66.5 births per 1,000 girls between the ages of 15 and 19." This constitutes a true social tragedy, given that complications during pregnancy and childbirth are the second leading cause of death among adolescents aged 15 to 19, in addition to reducing their chances of achieving their personal development goals and having a good quality of life.

It should be noted that Latin America and the Caribbean has the second highest rate of teenage pregnancy in the world. Furthermore, it is estimated that almost 18% of births in the region are to mothers under 20 years of age. Each year, around one and a half million adolescents between the ages of 15 and 19 give birth. (UNFPA 2021).

According to the United Nations Population Fund (UNFPA) in 2021, having a child at a young age in a Latin American country costs an average of 0.38% of Gross Domestic Product (GDP) per year. Analyzing the figures for each nation, the countries with the highest costs were found to be: Panama (0.79%), Colombia (0.58%), Peru (0.56%), Paraguay (0.35%), Mexico (0.34%), Guatemala (0.33%), Ecuador (0.26%), and Argentina (0.20%). In the case of Mexico, according to data from UNAM 2021, the country ranks first worldwide in teenage pregnancies, identifying that 23% of adolescents begin their sexual life between the ages of 12 and 14, and according to figures from the National Population Council (CNP), in 2020, it begins at an average age of 15.5 years and Statistics from the National

Institute of Perinatology 2019, indicate that it happens at an average age of 14.6 years.

According to statistical reports from the National Institute of Statistics and Geography (INEGI) (2018), in Mexico, 17.5% of registered births were to adolescent mothers. In Nuevo León, this figure was 15.7% (National Institute of Statistics and Geography INEGI) (2019). Furthermore, adolescent pregnancy is considered a multifactorial problem, with individual, family, and sociocultural factors influencing adolescents to make risky decisions and become pregnant. (Mendoza, A. et al. 2016)

In 2021, the states that reported the highest percentage of teenage pregnancies were: Chihuahua (18.2%), Guerrero (18%), Durango (17.6%), Puebla (17.5%), Chiapas (17.4%), Tlaxcala (17%), Veracruz (16.9%), and Coahuila (16.6%) among girls aged 15 to 19. (INEGI, 2021).

Similarly, according to data from the 2020 Population and Housing Census, Guerrero ranks second in teenage pregnancies, with more than 3,000 cases of pregnant girls under 19 years of age in the municipalities of Acapulco, Chilpancingo, Chilapa, Tlapa, Zihuatanejo, and Iguala. (Guerrero Congress, Covarrubias, 2022).

During 2021, there were 10,844 births to adolescent mothers between the ages of 15 and 19. These figures (both under 20 years old) represent 17.1% of the total births in the state (65,587 cases), according to data from the National Institute of Statistics and Geography (INEGI).

Given the early onset of sexual activity due to inadequate sexual and reproductive health education, which leads most adolescents to engage in unprotected sex, as well as the lack of interest from both authorities and adolescents themselves in learning about different contraceptive methods, the low level of education in some cases has led adolescents to engage in risky sexual practices. (Beltrán J. 2023).

The environment in which they develop and the social interaction they maintain in search of greater approval from older people, cause adolescents to seek these types of activities at an early age. The excess of taboos that both parents and adolescents have about sexual matters has not been eradicated; therefore, young people maintain the same pattern of pregnancies.

Teenage pregnancy is a serious problem affecting millions of women worldwide. The situation can be due to various factors, but the context is often similar. However, it is crucial to understand the causes of teenage pregnancy, the associated risks, and the consequences it can have on the mother, the child, and even the family.

To prevent teenage pregnancies, education in gender equality and policies that empower women and their rights in society are essential. This approach seeks to achieve the best way to change traditions, social roles, and improve socioeconomic conditions. Poverty has a direct link to teenage pregnancy. The information obtained through this study helped identify the factors that influence teenage pregnancy, as well as the level of knowledge about family planning among adolescents, their socioeconomic status, the psychological impact of early pregnancy, and its academic effects, assessing whether it contributes to school dropout. This study was conducted to determine the factors that contribute to teenage pregnancy among patients at a maternal and child hospital in the state of Guerrero, México.

METHODOLOGY

This qualitative, cross-sectional, and descriptive study, using non-random convenience sampling, was conducted between March and April 2024 at a maternal and child hospital located in the municipality of Chilpancingo, Guerrero, which was attending to 120 pregnant adolescents during that period. Of these patients, 90 agreed to participate in the study by providing informed consent. Participants were interviewed using the instrument entitled “Survey to Determine Risk Factors Influencing Adolescent Pregnancy,” which had a Cronbach's alpha validation of 0.807.The instrument consists of 23 questions divided into three sections: Section I: Personal Factors, Section II: Non-modifiable Family Factors, and Section III: Sociocultural Factors. The study began with a visit to the hospital, during which the necessary authorizations were obtained. Sampling was conducted using convenience sampling, selected by hospital administrators. The sample consisted of pregnant adolescents who attended outpatient, rooming-in, and emergency services during March and April 2024. The interviews were conducted at the hospital, in a consultation room that was specially prepared to ensure privacy, confidentiality, and comfort for the pregnant adolescent. The research objective was explained beforehand, and informed consent was obtained. The survey data were collected and analyzed using SPSS V21 statistical software, after the creation of a coding table and data matrix. A descriptive analysis with frequencies and an inferential analysis were performed.

RESULTS

The following results were obtained from the three sections into which the survey was divided:

Section I: Personal Factors.

According to the surveys administered to pregnant adolescents, the most frequent age in Section I was 17 years (27%). Regarding marital status, 52% reported being in a common-law union, while 36% reported being single. 51% reported having a secondary school education, and 6% reported no schooling. With respect to occupation, 64% reported being homemakers. 63% professed the Catholic faith. The most frequent age of sexual debut was 17 years (29%), followed by 16 (26%) and 15 (24%). (Table 1).

Table 1. Personal Factors

	Frequency	Percentage
AGE		
14	4	4%
15	14	16%
16	19	21%
17	**24**	**27%**
18	15	17%
19	14	16%
Marital Status		
Single	32	36%
Married	11	12%
Common-law union	**47**	**52%**
Education		
No schooling	5	6%
Primary	27	30%
Secondary	**46**	**51%**
High School	12	13%
Occupation		
Student	17	19%
Employee	15	17%
Homemaker	**58**	**64%**
Religion		
Catholic	**57**	**63%**
Christian	13	14%
Jehovah's Witness	3	3%
None	17	19%

Age of start of sexual life		
13	4	4%
14	7	8%
15	22	24%
16	23	26%
17	**26**	**29%**
18	6	7%
19	2	2%
Total	90	100%

Source: Survey to identify risk factors influencing pregnancy in adolescents treated at a maternal and child hospital, March-April 2024

Section II: Non-Modifiable Family Factors

Regarding the question of with whom they currently live, 52 adolescents (58%) reported currently living with their partner, followed by 21% with one of their parents, and 14% with both parents. Equal percentages of 36% indicated they lived with both parents and with one parent before their pregnancy, while 9% of the adolescents selected "other." 32% of the adolescents indicated that their partner is older than them, within the 20-23 age range. Analyzing the family factors involved in adolescent pregnancy, it was observed that 62% of the adolescents had a family history of teenage pregnancy**.**

Section III: Non-Modifiable Family Factors

When analyzing the sociocultural factors that influence teenage pregnancy, it was found that 24 adolescents reported having had conversations about sexuality with their mother (27%), followed by 24% who mentioned friends and 23% with their partner. In contrast, the least frequent option, at 4%, was siblings. 71% of the pregnant adolescents (64) had knowledge about family planning methods, while the other 29% indicated they did not. An alarming finding was that 76% of the adolescents did not use any family planning method during their first sexual encounter, revealing a significant lack of knowledge**.**

37% of the population reported feeling joyful upon learning of their pregnancy, while 28% indicated feeling worried, 21% expressed fear, 8% despair, and 7% sadness. These emotions can create a weak bond between mother and child. Thirty-six percent mentioned that the most influential factor in their pregnancy was seeking a relationship, while 28% indicated it was due to their partner's insistence, 21% due to family breakdown, and 6% due to their family's economic situation.

The majority of adolescents (90%) reported having a life plan. Of these, 47% stated they want to complete their studies, while another 20% indicated they want to start a family or obtain a good job.

DISCUSSION

Our research found that, of the 90 pregnant adolescents, 44% were between 16 and 18 years old, while in terms of schooling, 51% completed secondary education, 52% lived in common-law unions, and 63% professed the Catholic religion. This differs from the study conducted by Gómez Mercado and Mejía Sandoval in Colombia, which determined that the prevalence of pregnancy in adolescents between 10 and 19 years old was 17.8%, 69.5% had incomplete secondary education, 65.3% were single, and 34.6% professed to be Catholic.

In this study, the most frequent age of sexual initiation was 17 years, corresponding to 29%, different from data from UNAM 2021, which identified that 23% of adolescents begin their sexual life between 12 and 14 years of age, different from the figures of the National Population Council CNP in 2020, which refer to an average age of 15.5 years and Statistics from the National Institute of Perinatology INP, which indicate that it happens between 14.6 years on average.

This study reveals that the vast majority of adolescents (71%) are aware of contraceptive methods. 28% of them indicated that they only know about natural contraceptive methods. However, 76% of the adolescents surveyed did not use any contraceptive method during their first sexual encounter. This is similar to the findings of Hannah Canter et al. (USA, 2024), who reported that 71.1% of adolescents were aware of contraceptive methods, with the long-acting reversible contraceptive (LARC) being the least used (15.4%), and 28.9% reporting that they did not use any contraceptive method during their first sexual encounter.

When analyzing the family factors involved in adolescent pregnancy, it is observed that 62% of adolescents have a history of adolescent pregnancy in their family, different from the study carried out by Ochoa, A.K et al (2021) in Latin America and the Caribbean where it reveals that one of the main risk factors is family history with 47%.

According to the results obtained, we can identify that 36% of the adolescents mentioned that the factor that most influenced their pregnancy was the search for a relationship, different from the study carried out by Castañeda, J. et al. 2021 in Peru where they obtained as a result of their study that the most

influential factor was exposure to violence with 5.82%, as well as family functionality with 3.87%, different from the study carried out by Tiburcio, R. 2022, which states that the lack of economic resources, education, customs and traditions are the main causes of early pregnancy.

It was found that 24 pregnant adolescents (27%) reported having had conversations about sexuality with their mother, similar to the study carried out by Reyes V. et al., 2020 in Sonora, which identifies that the inhibition to ask about contraceptive methods is a factor that contributes to pregnancy, different from the study carried out by Sánchez, O. et al., (2023) in Mexico where it shows that of the adolescents surveyed, 51% reported not having received information about pregnancy prevention.

CONCLUSION

This research concludes that the identified factors influencing teenage pregnancy are personal, familial, and sociocultural. More than a quarter of the adolescents reported that their sexual activity began at age 17. More than a quarter reported that their partner was between 20 and 23 years old. More than half of the adolescents reported a family history of teenage pregnancies, and less than three-quarters indicated that they did not use any contraceptive method during their first sexual encounter. Less than half of the adolescents expressed feeling joy upon learning they were pregnant. When asked what they believed was the factor that influenced their pregnancy, more than a quarter cited seeking a relationship. These data are alarming, so it is urgently necessary for health institutions, the education sector, and society to get involved, offering awareness programs on pregnancy prevention, linked to the education sector to provide truthful, timely, and reliable information on sexuality and reproduction, as well as for parents, with the goal of reducing the percentage of teenage pregnancies.

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