



## Research article

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# Challenges of Teenage Pregnancy: Characterization of the Population of a Portuguese Hospital

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## Abstract

**Introduction:** Adolescence is characterized as a biopsychosocial transition from childhood to adulthood, rife with challenges. Parenthood during adolescence raises significant concerns for public health, society, and families, given the economic implications and associated medical, psychological, and social consequences.

**Objective:** To assess the births of children born to adolescent mothers at a hospital in the northern region of Portugal.

**Methods:** A retrospective study of all cases of births by adolescent mothers that occurred between January 1, 2015, and March 31, 2021. Statistical analysis was performed using the SPSS program.

**Results:** Since 2015, approximately 1.2% of all births at our hospital were to adolescent mothers, with a decreasing trend observed over the years. The average age of adolescent mothers was 17 years old. It was found that 77% of the mothers were students, and the majority received adequate prenatal care. A neonatal mortality rate of 2% was recorded. We observed that, at the time of conception, 83% of adolescents were in a relationship with the child's father, but this proportion decreased to 31% after childbirth. The majority of newborns were referred for follow-up care after hospital discharge.

**Conclusion:** A decrease in the number of adolescent mothers has been observed in recent years, possibly due to the vigilant intervention of healthcare professionals and increased awareness of the risks associated with teenage pregnancy. In the pandemic year 2020, we observed an additional reduction in the number of pregnant adolescents, likely attributable to the restrictions imposed by confinement measures.

**Keywords:** Adolescence; Parenting; Adolescent Pregnancy

## Introduction

Adolescence encompasses a biopsychosocial developmental phase that can begin before the onset of puberty and extend beyond somatic growth completion, ushering a child into adulthood in all its physical, psychological, and social dimensions [1]. This period is marked by profound physical, social, and psychological transformations, impacting not only the adolescent but also their family and healthcare providers [2-4].

Early motherhood remains a significant medical and social [5] in both industrialized and developing nations [6], exerting physical, emotional, social, economic, and educational repercussions [7]. Teenage pregnancy is recognized as a major public health challenge [8], particularly associated with elevated obstetric risks for adolescent mothers, especially those below the age of 15. These risks encompass conditions such as anemia, gestational

hypertension, nutritional deficiencies, preeclampsia, preterm birth, and maternal and neonatal mortality [7].

Teenage pregnancy combines the challenges of motherhood and adolescence, necessitating adolescents to assume responsibilities and obligations while still needing care themselves. The majority of these pregnancies are unintended and unplanned, influenced by factors such as academic underachievement, challenging life circumstances, family disruption, and socioeconomic vulnerability [3].

Adolescent mothers and fathers continue to confront widespread negative stereotypes, with society often perceiving adolescent mothers as irresponsible, sexually active, and uncertain about their future education and career prospects, while viewing adolescent fathers as disengaged from their children's lives and indifferent to their parental responsibilities [3].

Pregnancy resulting from contraceptive failure can be attributed to various factors, including inconsistent condom use, limited knowledge about reproductive physiology, unawareness of emergency contraception, and poor adherence to contraceptive methods [9].

The literature consistently links teen pregnancy to low socioeconomic status, underemployment, inadequate income, limited educational attainment, neighborhood disadvantages, physical disorder within communities, and income inequality at the neighborhood level [4].

The consequences of adolescent pregnancy are extensively documented, altering the life trajectories of teenagers by propelling them into early adulthood and curtailing their educational and employment prospects, as well as limiting their freedoms, opportunities, and choices [5]. Currently, approximately 11% of

all global pregnancies involve adolescent women, with a higher prevalence in less affluent countries [10].

## Methods

This study constituted a retrospective cohort investigation wherein we systematically assessed all instances of childbirth among adolescent mothers at a Portuguese hospital between January 1, 2015, and March 31, 2021. Informed consent was obtained from all participants.

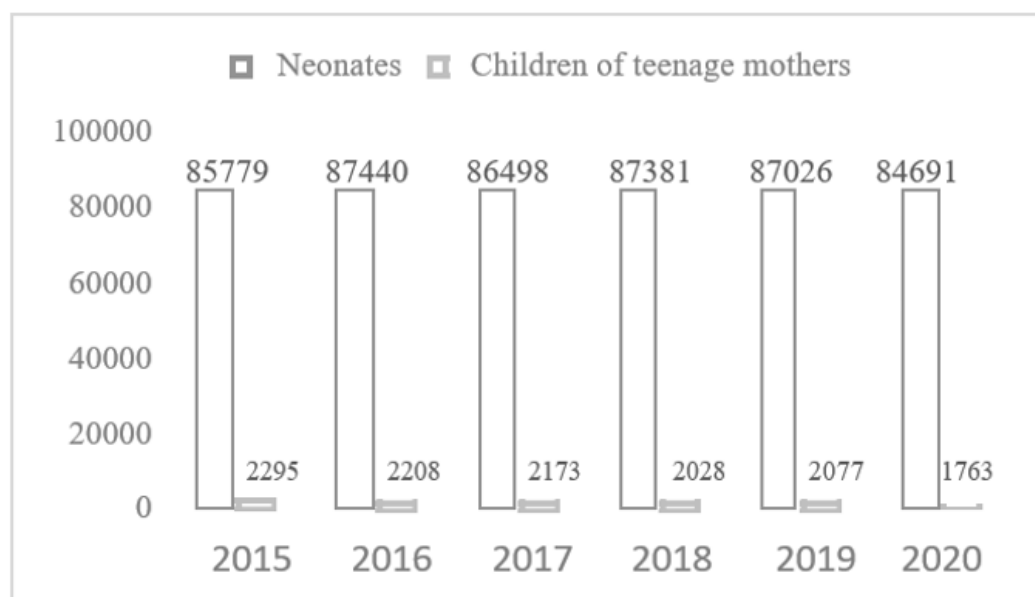
Data pertaining to teenage mothers were extracted from the computerized clinical system. Initially, all newborns delivered during the study period underwent evaluation, after which those born to mothers under the age of 18 were specifically identified and selected for further analysis.

Specifically, our inclusion criteria included adolescent mothers who underwent postpartum discharge and subsequently attended scheduled follow-up consultations. Additionally, a dedicated consultation session exclusively focused on neonates born to adolescent mothers was conducted.

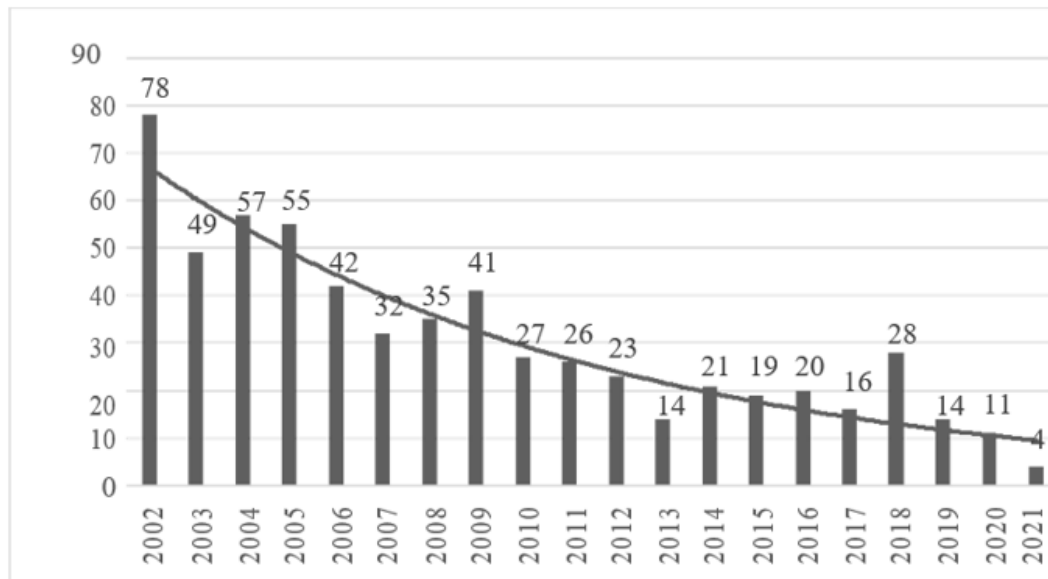
Data collection was facilitated through the utilization of the SCLINIC software, with subsequent statistical analysis performed using SPSS®. Ethical clearance for this study was obtained from the Health Ethics Committee at ULS Matosinhos, which granted unanimous approval without any reservations or objections.

## Results

In recent years, the number of children born to teenage women has decreased both globally and in Portugal. Graph 1 depicts the total number of infants born to teenage mothers vs total number of neonates in Portugal since 2015. The graph 2 demonstrate the total number of children off teenage mothers between 2002 and 2021.



**Graph 1:** Data from Statistics Portugal - Total number of births vs Total number of children of teenage mothers since 2015



**Graph 2:** Total number of children of teenage mothers between 2002-2021 in our hospital.

Since 2015, it has been found that 1.2% of all deliveries performed at the institution were of teenage mothers, with the years 2020 and 2021 being those with the lowest number of live births to teenage mothers (0.7% and 0.3% until March, respectively). Mothers had a median of 17 years, and fathers had a median of 19 years. Regarding socioeconomic characteristics, the majority of adolescents were students (77%).

As for the contraceptive methods used, it was found that about half (53%) did not use any protection method, either hormonal or barrier; 31% reported using a hormonal method and 1% a barrier method.

As far as obstetric history is concerned, gestational surveillance was adequate in 72% of patients, with a pregnancy diagnosis age of 12 weeks and 2 days on average. At the time of birth, the average gestational age was 38 weeks and 6 days. In terms of delivery type, 55% were eutocic, 31% were instrumented, and 14% were cesarean. The majority of neonates had adequate weight for gestational age, with only 13% being underweight for gestational age. Furthermore, there was a 2% newborn mortality rate.

As for the marital situation between the couple, the status when they became pregnant and after childbirth were compared, verifying that 83% established a dating relationship when they became pregnant, and after childbirth, only 31% maintained this relationship. It can also be seen that after the birth of the newborn, 53% no longer established any relationship with the child's father.

At the time of discharge, 85% of the children of teenage mothers were referred to a specialized external consultation, and it was also verified that 53% were assiduous, 34% were absent once a year, and 13% were absent more than once a year. Regarding follow-up, 39% maintained adequate follow-up; however, 26% abandoned the

appointment for unknown reasons.

## Discussion

The aim of this retrospective study was to characterize and analyze cohort of pregnant teenagers. There is a notable scarcity of literature that delves into the demographics of pregnant teenagers and the children of teenage mothers in hospital settings.

Motherhood is a transformative experience for all women, but it's especially profound for teenage mothers, often occurring during their early school years [5]. In Europe, the median age for the initiation of sexual activity is typically 15 to 16 years [9].

Our study unveiled a declining trend in the number of children born to teenage mothers in recent years, both on a global scale and within Portugal [11,12]. A significant portion of these pregnancies were unintended and unplanned, frequently influenced by factors such as low socioeconomic status, underemployment, and limited educational attainment [9].

In terms of the socioeconomic profiles of these pregnant adolescents, a noteworthy proportion were still students. The age of these teenage mothers suggests that their academic aspirations may be compromised, posing a significant challenge for them.

Interestingly, most existing literature tends to concentrate only on maternal aspects, often overlooking the role of fathers in these situations. Our data also indicated that many teenage couples initiated dating relationships when they discovered the pregnancy, but only a minority sustained these relationships after childbirth. This presents challenges in evaluating the level of paternal involvement in childcare and understanding the support provided to the mothers. Nevertheless, it is crucial to promote active father participation in the child-mother relationship, as studies indicate

that positive support can reduce the incidence of postpartum depression [13].

The hormonal fluctuations and the underdeveloped frontal cortex, characteristic of adolescence, can lead to impulsive behavior and, in some cases, unprotected sexual intercourse.

Contraceptive failures during pregnancy were attributed to various factors, including a lack of understanding of reproductive physiology and emergency contraception, but particularly to poor adherence to contraceptive methods. Alarming, our study, like a study conducted in Belgium, discovered that a significant proportion of pregnant teenagers admitted to not using any form of contraception, raising concerns among healthcare professionals [9].

Contrary to some findings, our study revealed that the majority of these adolescents received adequate and supervised prenatal care [14].

In contrast to the preference observed in some research, where teens lean towards cesarean delivery due to perceived pain and stress associated with vaginal birth [5], our study found that the majority of adolescents had uncomplicated vaginal deliveries.

It is essential to acknowledge the limitations of this study, including the data collection process through clinical files, and the fact that 26% of mothers did not follow up on consultations, making it challenging to comprehensively characterize this population. The inherent difficulties of adolescence, such as the stigma attached to adolescent pregnancy and the developmental immaturity typical of this age group, are probably the cause of this abandonment. Additionally, partner-related information in the collected data was insufficient.

In conclusion, this study underscores the imperative of addressing teenage pregnancy as a paramount public health concern. Therefore, it is important to implement comprehensive programs that emphasize education, access to contraception, and support for pregnant adolescents and their children. By recognizing the details and hurdles of teenage pregnancy, healthcare professionals and society can collaborate to provide enhanced care and opportunities for both adolescent parents and their offspring.

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## Conflict of interest

The authors declare that there is no conflict of interest.

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