

Pregnant teenagers treated at the obstetric center of a university hospital

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Abstract

According to the definition of the World Health Organization, adolescence is the phase of life between 10 and 19 years of age, a period marked by physiological and biopsychosocial changes, in which pregnancy is considered a risk factor for both mother and fetus from the biomedical point of view. Several factors have been associated with teenage pregnancy with negative maternal and neonatal impacts, such as: social vulnerability, low levels of education, income, and sexual education. This is a descriptive cross-sectional study with a quantitative approach, which aimed to identify obstetric factors and neonatal outcomes of greater frequency among pregnant adolescents treated at the obstetric center of a university hospital. Data collection was performed through a logbook of daily procedures at the obstetric center, so that all parturients under 19 years of age treated in 2018 were included in the study. The variables studied were age, parity, type of delivery, gestational age, diagnosis of syphilis and HIV, number of prenatal consultations, and insertion of an intrauterine device (IUD). As for the newborn, the following were analyzed: weight and hospital destination after birth. The data were processed using the SOFA.5.2 software (Statistics Open for All) and the significance level established was 95%, with a value of ($P \leq 0.05$). Three thousand four hundred and thirty pregnant women were evaluated. There was a birth rate of 19.3% among adolescents, with a correlation between the low weight of the newborn with the longest hospital stay and the number of prenatal visits, and also the identification of low insertion of contraceptive methods immediately after delivery. Adolescent pregnancy was correlated with low-birth-weight newborns and a longer stay in neonatal units, consequences often associated with the insufficient number of prenatal consultations. Public health policies for the inclusion of qualified nursing professionals in the management of insertion of the intrauterine device for the prevention of subsequent pregnancies deserve special attention.

Keywords: Adolescent; Childbirth; Pregnancy

1. Introduction

According to the Child and Adolescent Statute (ECA), a person below the age of 12 years is considered a child, and a teenager between the ages of 12 and 18 years (BRASIL, 1990), which is also defined by the world health organization (WHO) as a corresponding age period between 10 and 19 years of age. This stage is responsible for triggering physiological and bodily changes of the maturation of physiological development, a period in which pregnancy is considered a risk factor from a biomedical point of view for both mother and fetus (WORLD HEALTH ORGANIZATION, 1986; DIAS, TEIXEIRA, 2010).

Over the years, there has been a decrease in total fertility, however, recent studies have shown a worldwide rise in teenage pregnancies, estimated at 46 births per 1,000 girls aged between 15 and 19 years, mainly in Latin America and the Caribbean. In Brazil, the rate is 68.4% per 1,000 girls, which is higher than the rates in the Caribbean, being surpassed only by Sub-Saharan Africa (ORGANIZATION OF THE UNITED NATIONS, 2018).

Most countries with high adolescent fertility rates are located in Latin America and the Caribbean; in Central America, Guatemala, Nicaragua and Panama lead the ranking. In the Caribbean, the Dominican Republic and Guyana have the highest rates. In South America, the top leaders are Bolivia and Venezuela (ORGANIZATION OF THE UNITED NATIONS, 2018).

In contrast, developed countries such as the United States (USA) and Canada are below the world average of fertility. In the USA, for instance, there was a decrease in all ethnic groups, with a decrease of 8% between the years of 2014 and 2015 and, more recently, reaching a minimum of 22.3% of births per 1,000 thousand adolescents aged between 15 and 19 years (ORGANIZATION OF THE UNITED NATIONS, 2018).

In Brazil, the incidence of teenage pregnancy is present in groups of greater social vulnerability, being more concentrated among black and/or indigenous adolescents with low schooling, mainly in the north and northeast regions (BRASIL, 2013).

The low level of education among adolescents is shown to be negatively influenced in this process, where teaching has an important role in the dissemination of knowledge about sexual education, among others. A studied showed that 94.0% of adolescent mothers did not attend school (FALOPA *et al.*, 1994).

In view of these data, teenage pregnancy is considered a public health issue both for Brazil and for other developing and underdeveloped countries (ORGANIZATION OF THE UNITED NATIONS, 2018), becoming a risk for physiological and other aspects involved in adolescents' lives, such as: socioeconomic conditions, education, risk behaviors, seeking health services, understanding the gestational process and, especially, psychological issues (SANTOS *et al.*, 2014).

From the perspective of a successful pregnancy follow-up, it is important to monitor prenatal care as a tool for health interventions and reproductive control, ensuring maternal and fetal well-being (OLIVEIRA *et al.*, 2010).

From prevention actions and follow-up in prenatal consultations, the gestational outcome is determined. Worldwide studies have demonstrated a high incidence of premature births and low birth weight in this population when compared to other age groups (MARTINEZ *et al.*, 2011). This is a health index that determines maternal and, especially, neonatal risk, since prematurity and low birth weight are related to high rates of hospitalization for clinical complications, which will have an impact on the entire process of child development (BARBAS *et al.*, 2009).

With regard to the type of delivery among adolescents, based on studies carried out in the years 1993 and 1994, it was possible to observe high rates of caesarean sections, presumably due to the physiological conditions of pregnancy during this period, with a higher prevalence of cephalopelvic disproportion resulting from gynecological immaturity and also due to the medicalization process of childbirth, very present in the biomedical process (CUNHA *et al.*, 2002). Disagreeing with this scenario, recent data have shown higher rates of caesarean sections among older women, mainly being correlated to previous caesarean sections (FREITAS; SAVE, 2011).

The landmark for public policies aimed at adolescent health is recent in Brazil, having as its main reference the creation of the Child and Adolescent Statute (ECA) in the mid-90s (BRASIL, 1990). Public health policies for this public have important deficiencies in scope and quality regarding direct care in adolescence, with a small focus on birth control, family planning and sexuality education (FALEIROS,

2013). A manual for adolescents in primary care was recently published by the Ministry of Health, with chapters on teenage pregnancy (BRASIL, 2017).

Even though it is of fundamental relevance since guidelines/preventions must begin from the stage of primary care, there is a lack of actions that work with the intersectionality of services, sensitization of professionals and mainly with changes in the paradigms of being and existing in this age group.

This descriptive study aimed to identify obstetric factors and neonatal outcomes of greater frequency in pregnant adolescents treated at the obstetric center of a university hospital, as well as to make correlations with the literature, to contribute to the body of knowledge of the particularities of this public, adding data and information which can contribute to the promotion of public health policies on the topic of teenage pregnancy.

2. Material and Methods

2.1 Type of study

This is a quantitative, descriptive, cross-sectional study, which uses secondary data.

2.2 Population characteristics

The city of Dourados is located in the south of Mato Grosso do Sul, with an estimated population of 220,965 people in 2018, an average of 17,682 thousand female adolescents aged between 10 and 19 years (INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA, 2018).

2.3 Sample

The study sample was established using secondary data from a procedure log book of the obstetric center, which contains daily information of the parturients treated at the center. The sample was matched for age and exclusion criteria, resulting in a final sample of 491 adolescents.

2.4 Variables, inclusion and exclusion criteria

The study included pregnant women under 19 years old, admitted to the hospital's obstetric center in 2018, with records of all variables surveyed. For the study, the following variables were selected: age, parity, type of delivery, gestational age, diagnoses of syphilis and HIV, number of prenatal consultations, insertion of an intrauterine device (IUD); as for the newborn: weight and hospital destination of the newborn after birth.

Pregnant women below 19 years of age who did not have all the variables surveyed in their records and all participants of indigenous ethnicity were excluded from the survey.

2.5 Data analysis

The information obtained was inserted into tables using Microsoft Office Excel 2013, and the analyzes were performed using the SOFA.5.2 software (Statistics Open for All). Depending on the variability of the cases, continuous variables were presented as mean and standard deviation (SD) or median and interquartile range, whereas categorical variables were presented as frequency and percentage. To

verify the association between quantitative variables, we used Pearson's linear correlation association tests (r) and for non-quantitative variables, Spearman's correlation test (ρ). The level of significance was set at 95% ($P \leq 0.05$).

2.6 Ethical considerations

All procedures in this study were approved by the Ethics and Research Committee (CEP) of the Federal University of Grande Dourados (UFGD), under CAAE number: 13444519.1.0000. 5160.

3. Results

The results are presented in tables with absolute and relative values, and for continuous variables they were presented as mean and standard deviation (SD) or median and interquartile range.

In 2018, a total of 3,430 parturients were attended at the obstetric center, 19.3% were adolescents ($N = 652$). Among the adolescents, ($N = 161$) were of indigenous ethnicity, who were excluded from the study, totaling a final sample of ($N = 491$) adolescents.

In this study, the sample was made up of 491 parturients, included by the age group recommended by the World Health Organization (WHO), which is between 10 and 19 years old. The interval found between the ages was a minimum of 13 and a maximum of 19, with an average of 17 years, with a value of ($p = 0.3$), with no correlation between the mother's age and the newborn's weight classification.

Regarding the participants' pregnancy history, the gestational age in weeks ranged between a minimum of 24 weeks and a maximum of 43 weeks, with an average of 38 weeks and 2 days. As for the number of pregnancies, there was a minimum 0 and a maximum of 5 pregnancies, with an average of 1.3 pregnancies per adolescent; for the history of abortion, the interval found was between a minimum of 0 and a maximum of 2 abortions, with an average of 0.1 for each teenager.

Regarding the newborn's weight in grams, a minimum of 666 grams and a maximum of 4,198 kg was identified, with an average of 2,955 kg. The relationship between the weight of the newborn and their destination in the hospital demonstrated a value of ($p < 0.001$), demonstrating a significance between weight proportions and destination, which is described in (table 1).

The newborn's destination in the hospital units was 84% for joint accommodation ($N = 415$), 4.7% for the intermediate neonatal care unit ($N = 23$), 6.3% for the neonatal intensive care unit (ICU) ($N = 31$), 0.2% neonatal death ($N = 1$), and 4.3% referred to a different sector of the hospital ($N = 21$) (Table 2).

As for the number of prenatal consultations, a minimum of zero and a maximum of 19 consultations was identified, with an average of 7.4 consultations, and a value of ($p < 0.001$), with a significance in the correlation between the lowest number of prenatal care consultations and unfavorable neonatal outcome.

Considering the type of delivery, vaginal delivery appeared with a slight predominance of 60.3%, totaling ($N = 296$), when compared to the caesarean surgical procedure of 39.3% ($N = 193$), followed by 0.4% of deliveries which occurred at home ($N = 2$).

After the rapid testing for infectious diseases at the obstetric center, 5.9% of the adolescents ($N = 29$) had a reagent for syphilis, and 0.4% a reagent for HIV ($N = 2$).

Among the contraceptive methods that were inserted immediately after delivery, 4.1% had the

intrauterine device (IUD) inserted, totaling a sample of (N = 20); 0.2% of the sample got an Implanon, corresponding to (N = 1), as described in (Table 2).

4. Discussion

The phenomenon of teenage pregnancy has a global relevance and in many countries is considered a public health issue (ORGANIZATION OF THE UNITED NATIONS, 2018). The percentage of adolescent births verified in this research was of 19.3%, which is lower than the Brazilian percentage of 68.4% for every 1,000 girls (ORGANIZATION OF UNITED NATIONS, 2018).

Over time, the fertility rate has exponentially reduced from 6.3 children per woman in the early 1960s to 1.8 per woman between 2002-2006 (BRAZIL, 2006), however, among adolescents this phenomenon has been slower.

In Brazil, pregnancies among adolescents aged between 15 and 19 years are above the Latin American average (WORLD HEALTH ORGANIZATION, 2018). When compared to world-class indexes, which are 46 births per every 1,000 girls, and in developed countries such as the United States of America (USA), the rates are even lower than 22.3 per thousand adolescents (WORLD HEALTH ORGANIZATION, 2018).

Adolescent pregnancy is emphasized by changes that go far beyond structural and physical development, a milestone that influences psychic, social, cultural and economic issues (SANTOS, 2009).

According to a WHO report, the main causes of death among adolescents between 15 and 24 years of age are associated with pregnancy. Some complications, even if not specifically connected to early pregnancy, are more frequently observed in the literature. Among the main complications are Hypertensive Disorders of Pregnancy, which are considered the main cause of maternal and neonatal death (HENDERSON *et al.*, 2017). In Brazil, the incidence is of 10% among all pregnancies, in developed countries this frequency varies from 2 to 8%, in a context where a first pregnancy under the age of 17 years stands out among the main risk factors for the development of the disease (HENDERSON *et al.*, 2017; BRASIL, 2012; NASCIMENTO *et al.*, 2015). The main characteristics, which define the predisposition in adolescents when compared to adult pregnant women, are the immaturity of essential organs for a healthy pregnancy, lack of information due to low levels of education and difficulty in accessing SUS - Unified Health System (SILVA *et al.*, 2010).

In addition to the increased risks for maternal mortality, getting pregnant during adolescence represents a risk for neonatal mortality, that is, death rates in the first 28 days of life, resulting in a 75% greater risk of having a premature birth than women in the age group considered as adults (BRASIL, 2018). In Brazil, the rates of premature birth and low birth weight among pregnant teenagers are an important epidemiological marker, characterized by consequences of neonatal morbidity and mortality, with prematurity being responsible for 70% of perinatal mortality in the country (LANSKY, 2002; BRASIL, 2018).

In our study, it was not possible to correlate the age of the mother with the birth weight of the newborn, but it is known that teenage pregnancy - in addition to being a public health issue as previously mentioned – concomitantly refers to another issue of great relevance which is prematurity and,

consequently, low-birth-weight newborns who present high mortality rates when compared to neonates weighing 2,500 kg or more and a gestational age considered at term with 37 weeks or more (BORDIN, 2000; ARAÚJO, 2007).

There are several conditions that predispose to prematurity and low birth weight among adolescents, such as nutritional, socioeconomic, and cultural aspects that directly influence fetal development, and consequently low birth weight (MONTEIRO, 2003; CONDE-AGUDELO, 2005). In our research, it was possible to associate the response of low weight and the destination of the newborn within the hospital domain.

In addition to the immediate impacts on birth weight for the newborn, other late consequential impacts can be cited, such as: increased risk for infections, respiratory and thermal instability, with sequels of cognitive and motor development in childhood, causing an impact on the child and their family, in addition to echoes on SUS, resulting in prolonged hospitalizations, mainly in intensive care units and neonatal intermediate care units (BORDIN *et al.*, 2000; MEIO, LOPES, MORSCH, 2003).

Another factor that contributes to prolonged hospitalization of newborns is congenital infections, with a higher prevalence of infections of sexual origin of the mother (BRASIL, 2011). Among adolescents, sexual activity has become an increasingly precocious practice, as it is a period of sexual vulnerability often related to unprotected sexual exposure and risky behaviors, resulting in a higher incidence of teenage pregnancy and infection by sexually transmitted infections (SOCIEDADE BRASILEIRA DE PEDIATRIA, 2018). Among the most frequent infections, syphilis has had a high incidence and when not treated or treated inappropriately, it can cause serious consequences to the fetus such as: malformation, abortions, and fetal death (BRASIL, 2011).

The State of Mato Grosso do Sul (MS) is among the four states with the highest incidence of syphilis in pregnant women. In 2016, MS had the highest rate of cases in the country with 23.7 cases per 1,000 live births, representing rates above the national average (BRASIL, 2017).

The incidence of congenital syphilis in Brazil is of 12.4 cases per 1,000 live births. The State of MS was also one of those with the highest incidence of congenital syphilis, with 8.3 cases per 1,000 live births. In the city of Dourados, the headquarters of the hospital where the research was carried out, in 2017 there was an incidence of 34.4 cases per 1,000 live births (BRASIL, 2017).

The identification of the Human Immunodeficiency Virus (HIV) during pregnancy was also found in our study. Even with a low incidence, it is worth mentioning that the exposure to HIV by congenital route or during labor, delivery, postpartum or breastfeeding requires special attention to reduce transmission. It is possible to associate the infection with premature labor, very low birth weight, intrauterine growth restriction (IUGR), small for gestational age (ABEYÁ *et al.*, 2004).

The high rate of caesarean sections is a topic that has been the subject of studies in recent years. The high frequency of this procedure considers a change in obstetric practice in Brazil (DECLERCQ *et al.*, 2006). Studies even point to the existence of the creation of a caesarean section culture, with high numbers of procedures not for clinical/obstetric indication, but for "favoring" and/or for the "privilege" of an economic class and type of payment (GAMA, 2014). As with any surgical procedure, caesarean sections cause immediate and long-term damage to puerperal women and newborns, so that there is not enough evidence to demonstrate the benefits of performing the procedure in women who do not need it (WORLD

HEALTH ORGANIZATION, 2018).

Caesarean sections in adolescents, especially in primiparous women, draw attention for its exposure, since in many hospitals in the country previous caesarean sections have been predictive for an upcoming birth delivery (FREITAS, 2006; GOODALL, 2009). A decade ago, it was pronounced: *“once a previous caesarean, always a caesarean”* (CRAIGIN, 1916). The new literature and recommendations of the National Childbirth Assistance Guidelines oversee vaginal delivery after caesarean sections, even after a woman has had two previous caesarean sections (BRASIL, 2017). The main risks that generate medical interventions are linked to uterine rupture, very similar risks when the woman has had one or two previous caesarean sections; hence, it is important to individualize the recommendations according to the clinical and current history of the parturient, with interventions based on the early recognition of any adversity (LEAL, 2018).

In 2016, the World Health Organization (WHO) launched 56 recommendations to try to reduce caesarean rates, especially in Brazil, where the rates overlap those considered ideal (ORGANIZACION MUNDIAL DE SAÚDE, 2016). Since the mid-1985s, statements about the percentage of caesarean sections have been discussed, with the percentage recommended by the international community in the last 30 years ranging between 10 and 15% (LANCET, 1985). High rates have brought negative consequences to obstetric, neonatal outcome and health costs (ORGANIZAÇÃO MUNDIAL DE SAÚDE, 2016).

In our study, vaginal delivery was more prevalent among adolescents, however the caesarean rates found were 39.3%, above what is recommended in the current literature. Based on the assumption that most adolescents are primiparous, the risk factors associated with maternal and neonatal outcomes become more worrisome, especially over the long term of this woman's reproductive life. Scientific evidence is still under construction on the real effects of high rates of caesarean sections. It is already known of the direct effects on maternal and neonatal morbidity and mortality when comparing the caesarean and vaginal delivery route, however studies on a larger scale remain to be carried out for the real impact on pediatric outcomes, social and/or psychological well-being to be assessed (MASCARELLO, 2017).

In relation to prenatal care, the average number of adolescents in the study attended the minimum expected number of consultations recommended by the Ministry of Health; on the other hand, some did not perform any or at most nineteen consultations. In our study it was not possible to establish in which period of pregnancy the adolescents began prenatal care. Health institutions establish that patients must attend at least six prenatal consultations for the objectives of prenatal care to be fulfilled, guided by strategies for the prevention and/or detection of maternal fetal diseases, enabling a healthy development for the fetus with a reduction of harm to pregnant women (BRASIL, 2012).

Early appointment, which consists of the beginning of prenatal care before the sixth month of pregnancy, and non-adherence to prenatal consultations is a challenge for pregnant adolescents, commonly motivated by the fact that it is an unplanned pregnancy, adding up to the lack of information about the benefits of prenatal care, as well as the shame of looking for a health unit, which is a scenario of greater frequency among poorer adolescents (CESAR, 2011).

In our study, we observed a statistical relevance between the smaller number of consultations and the worst neonatal outcome: low weight and destination in the hospital unit.

The attachment of the pregnant adolescent to the family health strategy in prenatal consultations is one of the main pillars for a safe pregnancy, allowing reduction of gestational risks, exchange of information, experiences, and promotion of a better understanding of the pregnancy, since this period carries with it many fears, being subject to greater vulnerability of coping (MIRANDA, 2013). The commitment of professionals involved in prenatal care should guide the quality of care provided to adolescents in a longitudinal way during prenatal, delivery and postpartum period (MIRANDA, 2013). With assistance focused on health education with information about sexuality, delivery, and contraceptive methods, in addition to clearing the fears of adolescents in a clear and high-quality way, it allows them to have autonomy of choice based on knowledge.

As a strategy for the reproductive control of the population, public health policies over time have fostered inter-sectorial and multi-professional projects and actions for the population's reproductive planning, with the insertion of incentive programs in health care networks (BRASIL, 2002; BRASIL, 2012). The definition of family planning can be found in article 2 of Law no. 9,263, dated January 12, 1996, as follows: family planning is understood as the set of fertility regulation actions that guarantees equal rights of constitution, limitation or increase in the number of offspring by women, men, or couples (BRASIL, 1996).

Among the health actions aimed at adolescents' sexual and reproductive health, trained professionals with qualified listening are needed, who seek to understand the demands of the population and the fulfillment of their expectations.

In view of the abovementioned scenario, it is possible to observe the paramount importance of adolescent reproductive planning, with the provision of contraceptive methods throughout the assistance network, which should be discussed in the family health strategy in partnership with sexual education programs in schools, as a way of expanding their offer (MONTEIRO, 1998; VIEIRA, 2006). Among the most recommended and routinely offered methods are non-hormonal and hormonal methods, and public policies in recent years have encouraged the use of methods in the immediate postpartum period, being used as a practice to prevent a future pregnancy (FILHO *et al.*, 2018).

In 2017, the Ministry of Health launched a decree to expand the use of the Tcu-380 model copper intrauterine device (IUD), which consists of an intrauterine device, with contraception duration of 10 years and effectiveness greater than 99%, with a little failure rate when inserted correctly, with a percentage of 1 pregnancy error per 100 women (BRASIL, 2017; FILHO *et al.*, 2018).

In addition to being a safe method where the mechanism of action consists of an inflammatory, cytotoxic reaction, causing the sperm action not to be viable, the IUD has the possibility of reversion any time there is a desire to plan a new pregnancy. Despite being a method not greatly used in Brazil, studies show that it is a good alternative for adolescents when compared to other contraceptive methods. Furthermore, when compared to oral contraceptives, the IUD represents 22 times less risk of unplanned pregnancy (FILHO *et al.*, 2018). It can be inserted in the normal postpartum or immediate caesarean section, post-abortion, or curettage or in the puerperal period on an outpatient basis, targeting women of reproductive age and adolescents (FILHO *et al.*, 2018).

The hospital where we carried out the study has been working since 2017 with the offer of post-procedure contraceptive methods already described, including the copper IUD, model TCu 380A. In view

of the number of consultations performed and the birth rates among adolescents and women who are the target audience of this planning method, there is a low adherence to insertion.

Researches have shown a higher percentage of the expulsion rate of postpartum IUD or other procedures when compared to the insertion of an elective outpatient, especially when it is inserted after 48 (forty-eight) hours. The later the insertion, the greater the risks, which is a fact commonly reported by professionals as a disadvantage of the method for the low adherence to this practice.

In some countries, the practice of inserting an IUD has become increasingly positive. States in Brazil, such as the Federal District (DF) and hospitals like Sofia Feldman, have performed the practice of insertion by a professional nurse in normal postpartum, abortion or on an outpatient basis as family health strategies (CONSELHO FEDERAL DE ENFERMAGEM, 2010). The nurse is allowed to insert an IUD as long as they are trained, as provided in Resolution COFEN n. 358/2009: they are able to perform clinical consultation, prescribe and insert an IUD (CONSELHO FEDERAL DE ENFERMAGEM, 2010).

The worldwide campaign “Nursing Now” launched in 2019 has been motivating the Ministry of Health to strengthen the role of nurses in recent years. Among the themes addressed, teenage pregnancy shows itself as a reemerging panorama, which requires innovative initiatives, both for access to information on pregnancy and regarding the focus on the prevention of a subsequent pregnancy (CONSELHO FEDERAL DE ENFERMAGEM, 2010). The campaign recommends training nurses, obstetric nurses, and midwives to insert and remove contraceptive implants. In addition to reducing unwanted pregnancies, the nurse professional - being ahead of primary care – facilitates a greater health education, reducing inequality and expanding the health care of adolescents (CONSELHO FEDERAL DE ENFERMAGEM, 2010; CONSELHO FEDERAL DE ENFERMAGEM, 2009).

As in any study with data collection design from secondary sources, there is a possibility of bias due to insufficient or incomplete data, which is a limitation of the present study. Another limitation for the characterization of pregnant adolescents was the impossibility of data on ethnicity/color, education, and income.

5. Conclusion

Therefore, in this research it is concluded that a low birth weight and a lower number of prenatal consultations are among the main factors related to a longer hospital stay of the newborn. The complex nature of intensive care of low-weight or premature children demands a high cost from health services units, which leads to a reflection on the promotion of public health policies in favor of the adoption of incentive practices in the service network, with a primary focus on the prevention of subsequent pregnancies in adolescence, and with strategies for training professional nurses in the handling and insertion of the IUD.

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Appendix

Appendix 1– Mean and standard deviation (SD) or median and interquartile range of the continuous variables of adolescents and newborns treated at the University Hospital of the Federal University of Grande Dourados - HU / UFGD, in 2018.

Variable	Mean (SD)	Median (IIQ)	Minimum	Maximum	P
Age (years)	17.3 ($\pm$ 1.5)	18 (19 - 16)	13	19	
Gestational age (weeks)	38.2 ($\pm$ 2.7)	39 (40 – 37)	24	43	
Newborn weight (grams)	2955 ($\pm$ 602.8)	3045 (3370- 2630)	666	4198	P<0.001
Number of prenatal consultations	7.4 ($\pm$ 3.2)	8 (9 -5)	0	19	P<0.001
Number of pregnancies	1.3 ($\pm$ 0.6)	1 (2 -2)	0	5	
Number of abortions	0.1 ($\pm$ 0.3)	0 (0 – 0)	0	2	

Appendix 2– Frequency and proportions of characteristics of adolescents and newborns treated at the University Hospital of the Federal University of Grande Dourados - HU / UFGD, in 2018.

Variable	(N=491)	(%)
Type of Delivery		
Normal birth	296	60.3%
Caesarean delivery	193	39.3%
Home birth	2	0.4%
Positivity of the Rapid Test		
HIV	2	0.4%
Syphilis	29	5.9%
Postpartum Contraceptives		
IUD	20	4.1%
IMPLANON	1	0.2%
Destination of the newborn		
Joint accommodation	415	84.5%
Intermediate unit	23	4.7%
Neonatal ICU	31	6.3%
Death	1	0.2%
Others	21	4.3%

Abbreviations: HIV - Human Immunodeficiency Virus; IUD - Intrauterine Device; ICU - Intensive Care Unit.

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