

Pediatric prenatal visit: A integrative review



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ABSTRACT

In the face of changes in the living standards of contemporary societies in recent decades, the scientific community delves into the search for risk factors for the increase of non-communicable chronic diseases (NCDs), even with improvements in medical care. Individual and collective health is constantly influenced, with one of the drawbacks being the transition from mortality caused by communicable diseases to NCDs. Accounting for 76% of total deaths in Brazil, NCDs require a deeper look to enhance maternal and child health care, starting from prenatal pediatric consultations as a mechanism to mitigate the delayed effects of fetal epigenetic changes caused by gestational

complications. These complications are part of the spectrum of NCDs in adulthood. The implementation of prenatal pediatric consultations is linked to breaking the transgenerational effects of epigenetics to improve the health conditions of the mother-child pair, especially in primary prevention. Currently labeled as a "pregnancy course," it is conducted without due recognition of its importance, intermittently subject to changes in administrations, and lacking the regular presence of a pediatrician, thus losing the emotionally timely bond for improving maternal habits. Objective: Gather the most recent literary evidence on prenatal pediatric consultations and their implications for maternal and child health. Method: This study is based on an integrative literature review, structured through the use of search platforms such as SCIELO, BVS and PUBMED, as well as journals from the Brazilian Society of Pediatrics (SBP) and the books "Pediatrics Treatise" and "The Prenatal Pediatric Consultation." The keywords used were "pediatric prenatal visit", "prenatal care" and "pediatrics", with inclusion criteria being scientific articles in Portuguese, English, and Spanish published in the last 10 years. Results: Positive influences of prenatal pediatric consultations on the health of both the pregnant woman and the baby were observed, with benefits extending into childhood and adulthood. The consultations strengthened the doctor-patient bond, improved breastfeeding rates, and provided short- and long-term benefits to the mother-child pair. However, there is a lack of formal and systematic recognition of this action in the Brazilian Unified Health System (SUS), which serves 70% of pregnant women. Prenatal pediatric consultations (CPPN) are poorly recognized by obstetricians, pediatricians, and users, hindering Brazilian data on the benefits of this health promotion tool.

Keywords: Health promotion, Prenatal care, Women's health, Primary health care, Child health.



1 INTRODUCTION

Pregnancy, as it is a unique moment in the life of a woman and her family, is certainly subject to fear of the unknown, generating anxiety and difficulty in dealing with challenging situations (UMintimo da Saúde, 2012). Thus, the presence of support networks such as partners, family members, spirituality and, especially, health professionals trained to do so, are substantial elements for the mother-baby binomial to be made in the most natural way possible (BALICA; AGUIAR, 2019).

That said, the implementation of prenatal consultations adds to these support networks with the aim of ensuring the birth of a healthy baby and the absence of impacts on maternal health, in addition to addressing psychosocial aspects and promoting educational activities about the care of the newborn and the postpartum female body itself and its implications. In addition to establishing a positive relationship between pediatrician and family, with adherence to therapies and future care as a central point (UMintimation of Health, 2012; YOGMAN et al, 2018)

Although beneficial for the gestational period, evidence in the literature confirms the importance of multidisciplinary care, whose role would not only be centered on the Gynecologist and Obstetrician (OG), nurses or health agents, but would also share functions with the pediatrician as an interdisciplinary action. NSCLC is an opportunity to anticipate risks to reduce possible complications to the integrity of the pregnant woman's health and, consequently, to fetal health, allowing for adequate organogenesis. It allows maternal psychological support for guidance in non-preventable events such as malformations and for avoidable events such as prematurity (SBP, 2022; CERIANI, 2019), decreased GIG fetuses, dystocia, SGA, and intrauterine growth restriction.

According to the World Health Organization (WHO), the number of consultations during prenatal care consists of at least 6, made by the obstetrician or nurse. In addition, since 1984 it has been recommended that pregnant women and a companion also be seen by a pediatrician, preferably in the third trimester of pregnancy (JÍMENEZ; LINDO, 2020). Such consultation aims to allow questions and concerns regarding your child's health and to remedy them, in addition to being a propitious moment to provide guidance in advance about the first 1000 days of the newborn and its implications for the definition of the child's health, aiming, above all, to reduce the risks of developing chronic non-communicable diseases (NCDs) - obesity, arterial hypertension (AH), type 2 diabetes mellitus (DM2) - in adults (SBP, 2022).

Although the pediatrician's performance is positive, NPPC is not yet a reality in the Unified Health System and occurs timidly in the routine of most health plans due to the low adherence of obstetricians in referring to the pediatrician, users do not know this right and the pediatrician, in turn, needs to be trained for the new demand. In the United States, even with 78% of pediatricians offering this consultation, only 5 to 39% of parents go to the appointment. In Brazil, on the other hand, this



percentage is not known due to low adherence to this intervention, which makes this population group susceptible to the development of NCDs in adulthood (SBP, 2022).

Thus, the objective is to retrieve the most recent scientific evidence on the benefit of pediatric prenatal consultation and its short- and long-term consequences for the binomial in order to raise awareness of the assertiveness of this tool as an effective mechanism for the prevention of NCDs. Therefore, changes will be necessary, such as the declaratory introduction of the CPPN in the SUS as a public policy and the beginning of training in medical schools for academics, residents, pediatricians and postgraduate courses in health promotion.

2 METHOD

The present study is an integrative review of the literature from November 2023 to December 2023. The integrative review consists of broad and pertinent publications on the development or "state of the art" of a given subject, from a theoretical and empirical point of view (MENDES, 2008). They consist, basically, of the analysis of the literature published in books, articles of printed or electronic journals, in the interpretation and critical and individual analysis of the author (ROTHER, 2007).

This synthesis of information allows the identification of gaps in knowledge to support new studies, in addition to having a fundamental role for continuing education, after all, it enables the updating of knowledge about the chosen theme in a short period of time (ATHALLA; CASTRO, 2005).

For the structuring of this study, a research question (PP) was elaborated delineated in the acronym (PVO), consisting of the terms: pediatric (P- patients or study population), 'prenatal consultation' (V - dependent qualitative variables) and 'immediate and long-term implications on maternal and child health' (O - outcome, outcome, to be identified). Thus, the PP was configured as follows: "how is the scientific and literary evidence regarding the implications of pediatric consultations in prenatal care for maternal and child health?".

The scientific databases used were: *Scientific Electronic Library Online* (SCIELO), Virtual Health Library (VHL), PUBMED and journals of the Brazilian Society of Pediatrics (SBP) and the books: *Treaty of Pediatrics* and *The Prenatal Pediatric Consultation*.

In these, the keywords used to search for articles were: "pediatric prenatal visit" and "prenatal care", with the inclusion criteria being scientific articles in Portuguese, English and Spanish, carried out in humans, published in the last 10 years and the inclusion criteria (MOHER, 2009). The parameters for exclusion were those whose contents did not converge with the objectives of the present review, as well as those whose inclusion criteria were not fully met.

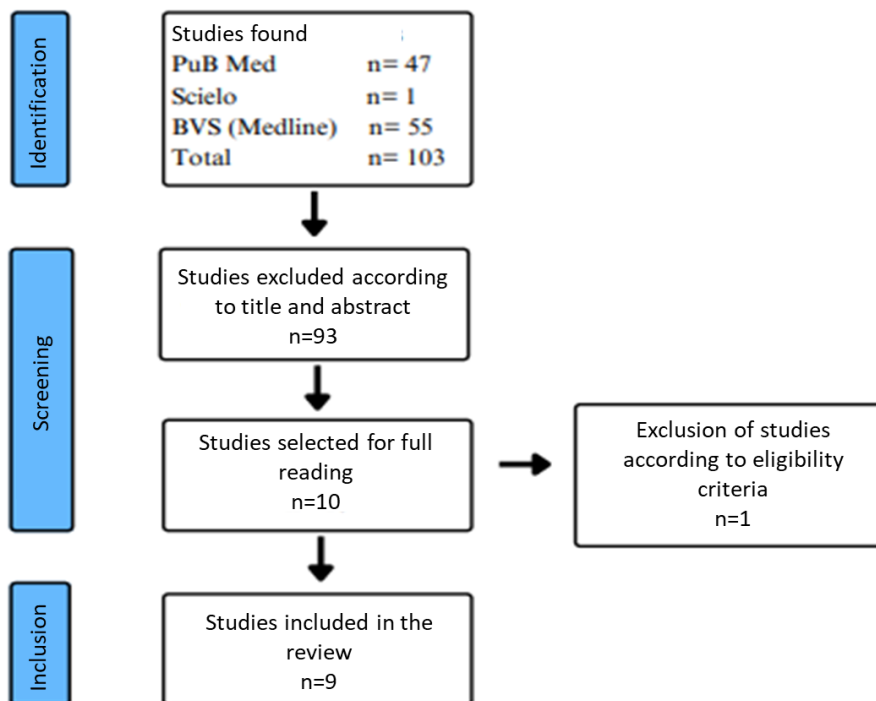


3 RESULTS

The information for each stage of the article selection process was indicated in the eligibility flowchart based on PRISMA (Main Items for Reporting Systematic Reviews and Meta-analyses) (Figure 1).

According to the data indicated in the eligibility flowchart based on PRISMA (Main Items for Reporting Systematic Reviews and Meta-analyses) (figure 1), through the Boolean search, 103 articles were located, of which 47 were from PubMed, 1 from Scielo, 55 from VHL (Medline). After applying the eligibility criteria used for screening and selection, they culminated in 9 relevant articles for analysis and discussion.

Figure 1: Eligibility Flowchart



Fonte: Adaptado de (Moher, Liberati, Tetzlaff, & Altman, 2015)

4 DISCUSSION

The authors agree that prenatal pediatric consultation is recommended in the last trimester of pregnancy, between the 32nd and 36th weeks of gestation and has convenient effects on maternal-fetal health to reduce NCDs (GARCIA, 2020). In the global context, NCDs are responsible for approximately 38 million deaths annually, causing 70% of all deaths, while in Brazil, the figures reach 76%. Furthermore, it is essential to report that the presence of such diseases invariably implies exorbitant costs to developing countries, which can reach US\$ 7 trillion, values demonstrated during the years 2011 and 2025 (MALTA et al, 2017).

The NPPC approach can be employed in 4 ways. The ideal is the complete consultation, scheduled with both parents, pregnant woman and companion or only the pregnant woman. Obstetric



history is evaluated to detect risk factors that may increase the possibility of fetal epigenetic effects in an attempt to reduce risks with timely guidance, encourage a balanced diet, weight gain during pregnancy according to BMI at the beginning of pregnancy, healthy lifestyle habits, control of comorbidities such as gestational diabetes and hypertensive syndrome of pregnancy, excessive weight gain, compliance with vaccination schedules, encouragement of postpartum breastfeeding, cessation of the use of substances such as alcohol and other drugs during pregnancy and lactation, transmitting useful information about childbirth, detection of risk factors for mental disorders, guidance for public policies of care and guidance on first care and safety of the newborn during the first days (JÍMENEZ; LINDO, 2023; YOGMAN et al, 2018).

This first approach is extremely relevant, essentially, in the first pregnancies, to adolescent parents, to families with high-risk pregnancies, with complications or twin pregnancies, with a history of previous abortions or fetal deaths, with a history of malformations, of previous pregnancies with premature births, in cases of newborns hospitalized in the Neonatal Intensive Care Unit, parents planning to adopt a child, same-sex parents, and those who have any kind of doubt or anxiety regarding pregnancy, childbirth, and postpartum care (YOGMAN et al, 2018; LÓPEZ-CANDIANI, 2014).

The second type of contact can be promoted through telephone calls, briefly, either to address introductory data about the parents and the pregnancy or to provide elementary data for the family. The third mode of approach is the group prenatal consultation, in which couples can exchange experiences, knowledge and promote mutual support (JÍMENEZ; LINDO, 2020; YOGMAN et al, 2018). This format is carried out in the SUS, but not as a public policy, so that the realization, when it occurs, is intermittent, depends on the transition and engagement of public administrations, does not have a constant team and often without the presence of the pediatrician, losing an emotionally propitious moment to establish the pregnant woman's commitment to self-care and the care of the child. Thus, consultation with a pediatrician can be a protective factor for maternal and, especially, fetal health (CERIANI, 2019).

Mei, Aligne, and Vanscott (2020) define that the NPPC is not just a "meet and greet" visit, it is a recognized instrument of comprehensive prenatal care and, in continuity, Price (2018) emphasizes that the NPPC is a tool capable of influencing multiple public health measures in both child and maternal health.

In addition, during the prenatal pediatric consultation, there are topics that should be systematically addressed, such as newborn hygiene, home safety measures, vehicle safety measures, clarification of doubts about circumcision, family routine and possible demands of the newborn, frequency of appointments with the pediatrician, vaccination, neonatal tests, pacifier use, emotional support for parents, declaration of live birth, birth certificate and encouragement of breastfeeding,



which can mitigate epigenetic effects on the child and the mother. (YOGMAN et al, 2018; LÓPEZ-CANDIANI, 2014).

Breastfeeding can protect the newborn from allergies, diarrhea and reduces the risks of the child developing obesity later by reducing the NCDs of adulthood. For maternal health, breastfeeding is also extremely important, as it helps prevent breast and ovarian cancer, reduces the risks of postpartum hemorrhage and the development of diabetes, and strengthens the maternal bond. NSCLC initiates and strengthens a positive and lasting interaction between physician and family, from before birth to adolescence (PENHOLATI et al, 2014; PRICE, 2018).

The NPPC allowed a decrease in prematurity, a lower demand for urgent and emergency services, better adherence to childhood vaccination schedules, reducing the morbidity and mortality of communicable diseases, and an increase in breastfeeding time (PRICE, 2018; GARCIA, 2020) resulting in the possibility of reducing childhood obesity and associated comorbidities such as hypertension and type II diabetes. In addition, encouraging parents to have healthy habits is an essential point for defining the child's health over the years, blocking the creation of an obesogenic and sedentary environment.

Despite the irrefutable advantages observed by the current scientific evidence of the benefits of pediatric prenatal consultation since its implementation in 1984, in Brazil it has only been implemented in medical plans since 2016 by the ANS (SBP, 2022), depriving the 70% of the Brazilian population that uses the SUS of this privilege. There is a gap in studies that show the percentage of CPPN care provided to pregnant women, its results for maternal and child health (during childhood and until adulthood) and the economy of non-developing nations, such as Brazil, if prenatal care were incorporated into the routine of Primary Health Care in the SUS.

In addition, it is questioned about the benefits that could be achieved if there were policies that supported the pre-conceptual consultation and if the prenatal pediatric consultations were not restricted only to the third trimester of pregnancy, but were carried out in the first trimester by anticipatory actions of, for example, avoiding excessive weight gain of the pregnant woman, predisposing her to gestational diabetes mellitus and hypertension and mitigating fetal epigenetic alterations resulting from these diseases, such as GIG and SGA fetuses, as well as the perpetuation of this disease in the postpartum period.

5 FINAL THOUGHTS

In view of the evidence, the benefits offered by the implementation of prenatal pediatric consultations extend from the prenatal period to the life of the binomial. Therefore, in view of the relevance of preventive actions such as NPPC, it is imperative to emphasize the need for new longitudinal studies that certify the importance of new health promotion tools that meet the new



demands of changes in lifestyle habits and socioeconomic patterns in recent decades. To evaluate the importance of pre-conceptual consultation, prenatal consultation and NPPC which, added to the existing actions, are an option for a broad vision of health from fetal formation to old age as a continuum.

Changes in the pedagogical programs of medical schools to intensify multidisciplinary actions and training of academics, pediatricians, obstetricians and graduate courses strengthen an excellent patient-centered care.



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