

## **Pediatrics and psychiatry: Clinical and psychological aspects related to complications of premature birth**

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### **ABSTRACT**

**Introduction:** Prematurity is defined as birth below 37 weeks, and can be moderate, severe or extreme. The preterm birth of the child can cause several complications for both the mother and the baby. Thus, premature birth presents itself as a potential biological and psychosocial risk for the child's development, as well as can cause generalized anxiety disorder in the mother, caused by the early separation of mother and baby and excessive concern with the survival of her child. **Objective:** The present project aims to perform a bibliographic analysis on the complications generated by premature birth for the health and psychosocial development of mother and baby. **Methodology:** this is an integrative literature review, carried out in the following databases: Scientific Electronic Library Online (SciELO), Web of Science and National Library of Medicine (PubMed/Medline), Google Scholar and Virtual Health Library (VHL). A total of 30 publications were identified, using 15 bibliographic references from the last 46 years. The exclusion criteria were non-pertinence to the theme, and articles prior to this period. The articles analyzed were selected according to the following descriptors: prematurity, psychosocial development, preterm birth, mother, baby, and health. **Results:** the first years of life are of paramount importance for child development, however, prematurity generates impacts on the child's health, and can lead to syndromic conditions or even, in some cases, death, in addition, preterm birth can cause cognitive impairments, behavioral disorders and neuropsychosocial disorders. **Conclusion:** it is evident that premature birth is accompanied by several challenges, both for the survival and development of the child, as well as for the constant concern generated in the mother. Analogous to this, it is of paramount importance to monitor the mother and the baby in order to ensure a better quality of life.

**Keywords:** Prematurity, Mother, Baby, Health, Psychosocial development.

### **INTRODUCTION**

The premature newborn is characterized by the individual who was born before 37 weeks of gestation, and can be subdivided into extremely premature < 28 weeks, very premature between 28 and 32 weeks and moderate to late premature between 32 weeks and 37 weeks, it is worth mentioning that the

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lower the gestational age, the lower the baby's survival and consequent greater the neonatal complications (ROCHA, 2022).

In Brazil, approximately 11% of all births occur before 37 weeks of gestation, thus it corresponds to a public health problem, since complications of prematurity are one of the main causes of death in the neonatal period, in addition, compared to full-term children, those born preterm are up to four times more likely to have behavioral problems. including problems with attention, organization, social and emotional function, and self-monitoring (OLIVEIRA, 2023).

Prematurity leads to different types and complications for the baby, among them are the lack of adequate postural control during motor activities, as they start extrauterine life with immature and vulnerable central and sensorimotor systems, language or cognitive difficulties, developmental delay/atypical fine and gross motor, psychomotor movement deficit. In addition, when the newborn is hospitalized in neonatal units, they receive intense treatment and constitute excessive sensory stimuli for the baby, painful procedures, and excessive stress that can impair brain development, affect the baby's multisensory integration processes, perception of self and the environment (OLIVEIRA, 2023).

Hospitalization in a neonatal ICU is a frustrating and stressful situation for the baby's mother, which leads to restlessness, worry, feelings of guilt, fear, shame, depression, anxiety, sleep disorders, fatigue, social isolation by the mother due to excessive concern with her child who now needs medical care, since the mother suffers from the breach of expectations idealized by her for the postpartum period. In addition, the period of separation between the parents and the child can lead to a delay and damage in the establishment of the bond between parents and baby (CRUZ, 2021).

Thus, the present study aims to present the aspects related to premature birth, emphasizing the complications for the mother and the baby resulting from this situation in a clinical and psychological view.

## **OBJECTIVE**

Premature birth can cause damage to psychosocial conditions not only during the child's development, but also for the mother and the baby's family. Following the above, the present project is an integrative review of the literature that aims to analyze the impacts caused by complications of prematurity in the clinical and psychological spheres of mother and baby.

## **METHODOLOGY**

The present project was built from an Integrative Literature Review approach, with the objective of presenting a preliminary theoretical analysis about the psychological impacts related to complications in preterm birth.



For this, a bibliographic survey was carried out in the databases Scientific Electronic Library Online (SciELO), Web of Science and National Library of Medicine (PubMed/Medline), Google Scholar and Virtual Health Library (VHL). The articles analyzed were selected according to the following descriptors: prematurity, psychosocial development, preterm birth, mother, baby, and health. A total of 30 publications were identified, and 15 bibliographic references were used, ensuring elucidation and relevance to the object of study.

The inclusion criterion establishes the selection of articles from the last 46 years. Articles prior to this period and those that did not meet the criteria for the objective of the study were excluded.

## **DEVELOPMENT**

Preterm birth, defined by the World Health Organization as that which occurs before 37 weeks of gestation, represents a significant challenge to global public health. The WHO highlights that the incidence of preterm births varies widely between different regions of the world, reflecting disparities in maternal and newborn health care (WHO, 2021).

Stoll et al. (2010) point out that "complications associated with preterm birth include, among others, respiratory distress syndrome, necrotizing enterocolitis, and intraventricular hemorrhage." These conditions require immediate and complex interventions, often involving long stays in neonatal intensive care units (NICU). Respiratory distress syndrome, for example, results from surfactant deficiency in the immature lungs of premature newborns, which makes it difficult to breathe properly.

According to Papile (1978), "intraventricular hemorrhage is a severe complication that can lead to permanent brain damage." This condition is more common in extremely premature newborns and can result in cerebral palsy, cognitive deficits, and other neurological impairments. Papile emphasizes the importance of monitoring and early intervention to minimize neurological damage.

Cloherly et al. (2012) reinforce the importance of a systematic approach in the management of clinical complications in preterm infants. In their manual, they detail diagnostic and treatment protocols for conditions such as respiratory distress syndrome and necrotizing enterocolitis. Proper management of these conditions is crucial to reduce mortality and morbidity associated with preterm birth, highlighting the need for trained multidisciplinary teams and adequate resources.

The hospitalization of a premature baby in the NICU can represent for the parents and the child a challenging and distressing period, as the relationship and the initial care that could occur between them are naturally hampered by the environment and the procedures required during hospitalization (Duarte et al., 2010).

According to Pedroso & Bousso (2023), the NICU is defined as a place prepared to receive high-risk babies and aims to provide care through a qualified team to support and meet the baby's needs,



ensuring the chances of survival. Nevertheless despite being a fundamental place for the survival of premature babies, it can become an environment hostile to those who are not adapted to it, to conditions such as strong and continuous lights, variations temperatures and the various procedures that babies have to face, disrupt their sleep cycle, in addition to causing discomfort and pain (Reichert, Lins, & Collet, 2007, apud Nascimento, 2012). This routine that babies are subjected to, in addition to influencing their development, becomes a process for parents distressing, and often makes them feel insecure, due to a lack of knowledge regarding the son's clinical picture (Oliveira, Veronez, Higarashi, & Corrêa, 2013).

Analyzing these factors, it can be seen that the need for hospitalization in the NICU of premature babies can impair the initial contact between parents and their child. However, it is critical to recognize that the mother's participation during the hospitalization of the preterm infant is crucial to establish and strengthen the bond between the two, if the health of both the baby and the mother allows, this approach should be stimulated and expanded. When a premature baby requires hospitalization, factors such as length of hospital stay, medical procedures to which she had to undergo and care she received during this period, are relevant to evaluate their development (Padovani, Linhares, Carvalho, Duarte, & Martinez, 2004).

It is found that, despite the possibility of premature birth influencing significant areas of life of the baby, the consequences resulting from prematurity in its development, negative or not, will depend on the time of birth, birth weight, postnatal care, and environmental influences to which the baby will be exposed in infancy (Mussen et al., 2001).

The psychological impact of preterm birth on parents is significant, often resulting in heightened levels of stress and anxiety. Treyvaud (2012) examines how the experience of having a premature baby can affect the mental health of fathers, particularly mothers, who are more susceptible to postpartum depression. This parental stress can have long-lasting consequences, negatively influencing family dynamics and the baby's development, which underscores the need for ongoing psychological support. They also noted that a supportive family environment, with well-informed and emotionally stable parents, can help mitigate some of the negative impacts of prematurity.

Bhutta et al. (2002) conducted a comprehensive meta-analysis on the effects of preterm birth on children's cognitive and behavioral development. The results indicate that children born prematurely have a higher risk of cognitive developmental delays and behavioral difficulties at school age. These findings underscore the importance of early interventions that can mitigate these adverse effects and support the healthy development of these children.

Zeanah (2018) addresses intervention and psychological support strategies for premature infants and their families. He argues that early intervention programs, which include psychological and educational support, are key to promoting the emotional well-being and development of premature



infants. The author highlights the need for an integrated approach that considers both clinical and psychological aspects in the care of these families. Collaboration between different specialties is essential to address the multiple needs of these patients, from initial critical care to long-term follow-up.

## **FINAL THOUGHTS**

Premature birth is a delicate event and causes clinical and psychological repercussions on the baby and parents. Among all the complications, the biological ones that the neonate is subject to, such as respiratory distress syndrome, necrotizing enterocolitis, intraventricular hemorrhage and neurodevelopmental delay, and the psychological ones for the family, such as Generalized Anxiety Disorder and Post-Traumatic Stress Disorder, stand out. Thus, we conclude the need for multidisciplinary neonatal and family follow-up to promote health and quality of life.

Therefore, it is important to prepare the team to prevent or manage the physical diseases that may occur to the neonate. This includes having knowledge of maneuvers and medications, as well as the ability to clarify the situation to the family. Thus, survival will be guaranteed and future repercussions on the baby, such as cognitive, neurological and psychosocial deficits, will be avoided.

In addition, the performance of a multidisciplinary team prepared to deal with the family is essential to avoid psychological consequences. The use of psychologists and other empathetic professionals will allow the monitoring and reduction of suffering on the part of the parents.

However, unfortunately it will always be a worrying process for the family. Therefore, reducing the occurrence of premature births is the best way and this depends on excellent prenatal care and the active search for pregnant women to perform it. So that, then, the factors that cause prematurity are prevented.

Finally, there is a need for more studies within neonatal Intensive Care Units to evaluate other aspects that cause psychological disorders in parents and increase infant mortality. In addition to neonatal care that could be included to reduce the complications of premature birth.



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