ABSTRACT

Objective: verifying the prevalence of low birthweight in a public hospital. Method: this is a field research, descriptive, exploratory, retrospective, documental with a quantitative approach, performed in a public hospital in Chapadinha/MA/Brazil. The sample consisted of 52 records. The data were analyzed and presented by means of a figure and two tables drawn up with the help of Microsoft Excel 2007. The study had the project approved by the Research Ethics Committee, CAAE 19987213.2.0000.5210. CAAE 11120713.4.0000.5084. Results: 61.5% of the mothers were between 18 to 25 years old, 73.1% had primary education, 53.8% were single, 67.4% had less than 6 consultations, 53.8% were smokers, 55.8% had between 1 to 3 children, 67.3% had normal birth; children, 54% were male; 15% weighing less than 2.500 g and 50% were eutrophic. Conclusion: the results justify epidemiological studies that attempt to identify risk factors for the occurrence of low birth weight, and determine their relative importance. Descriptors: Mortality; Child; Low Birth Weight.

RESUMO

Objetivo: verificar a prevalência de baixo peso ao nascer em um hospital público. Método: trata-se de uma pesquisa de campo, descritiva, exploratória, retrospectiva, documental, com abordagem quantitativa, realizada em um hospital público da cidade de Chapadinha/MA/Brasil. A amostra foi constituída de 52 prontuários. Os dados foram analisados e apresentados por meio de uma figura e duas tabelas elaboradas com o auxílio do Programa Microsoft Excel 2007. O estudo teve o projeto aprovado pelo Comitê de Ética em Pesquisa CAAE 19987213.2.0000.5210. CAAE nº 11120713.4.0000.5084. Resultados: 61,5% das mães estavam entre 18 a 25 anos, 73,1% possuíam o ensino fundamental, 53,8% solteiras, 67,4% realizaram menos de 6 consultas, 53,8% tabagistas, 55,8% tiveram entre 1 a 3 filhos, 67,3% tiveram parto normal; de los niños, el 54% eran masculino, 15% com peso abaixo de 2.500 g y 50% eran eutróficos. Conclusão: os resultados justificam os estudos epidemiológicos que buscam identificar os fatores de risco para a ocorrência do baixo peso ao nascer, e determinar a sua importância relativa. Descriptors: Mortalidade; Criança; Baixo Peso ao Nascer.

RESUMEN

Objetivo: comprobar la prevalencia de bajo peso al nacer en un hospital público. Método: se trata de una investigación de campo descriptiva, exploratoria, retrospectiva, documental, con un enfoque cuantitativo, realizado en un hospital público de Chapadinha/MA/Brasil. La muestra consistió en 52 registros. Los datos fueron analizados y presentados por medio de una figura y dos cuadros elaborados con la ayuda del Programa de Microsoft Excel 2007. El estudio tuvo el proyecto aprobado por el Comité de Ética en la Investigación CAAE 19987213.2.0000.5210. CAAE Nº 11120713.4.0000.5084. Resultados: el 61.5% de las madres tenían entre 18 a 25 años, 73.1% tenian educación primaria, 53.8% eran solteras, 67.4% tenían menos de 6 consultas, el 53.8% eran fumadores, el 55.8% tenian entre 1 a 3 hijos, el 54.3% tenian un parto normal; de los niños, el 54% eran varones; el 15% de peso inferior a 2.500g y el 50% eran eutróficos. Conclusión: los resultados justifican los estudios epidemiológicos que intentan identificar a los factores de riesgo para la aparición de bajo peso al nacer y determinar su importancia relativa. Descriptores: La Mortalidad; Niños; Bajo Peso al Nacer.
INTRODUCTION

The importance of low birth weight to public health is determined not only by the subsequent risk of mortality and morbidity, but also by the frequency with which it occurs. The most prevalent under birth weight are observed in the countries with and without development, as a result of the worst living conditions existing in these sites.1

In developing countries of intraterine growth retardation (IUGR) has a high incidence, affecting 23.8% annually (30 million) of newborns. At the same time to this fact, it has been observed an increased incidence of low birth weight, mainly due to IUGR, affecting 16% (17 million) of all births.2

In Brazil, this is not different. Some studies show this same trend in recent decades. Thus, it implies, together with low birth weight (LBW) and prematurity, a major public health problem being associated with increased mortality and morbidity in the neonatal period (children aged zero to 28 days of life). The determinants of this increase is in the first place, prematurity, and second, low birth weight.3

A third dies before reaching one year of age. In Brazil, the Ministry of Health, the leading causes of infant mortality are related to perinatal conditions, among them respiratory problems and metabolic, as difficult to regulate body temperature. The chances of survival of these infants have increased, accompanied by a series of increasingly specialized procedures, as well as assistance being provided, as in the use of technologies for this purpose.4

It is understood by low birth weight (LBW) the birth of newborns weighing less than 2.500g. The main responsible for this condition are the intraterine growth retardation (IUGR) and short pregnancy, prematurity, which it regards as SGA children who have birth weight below the 10th percentile for gestational age.5

Epidemiological studies are investigating the causes that lead to the lower weight of the newborn, such as: child gender, maternal age, socioeconomic conditions, and prenatal care. In addition to these, smoking and maternal malnutrition are also important factors that influence birth weight. The main effect of smoking is on the intraterine growth retardation (IUGR) and not on prematurity, while a low pre-pregnancy body mass index is a major cause of premature births.6

The analysis of live birth data also shows inadequacies in the coverage of Live Birth Information System -. SINASC in some municipalities of the country, although of lesser magnitude than those presented by the Mortality Information System (MIS) of the Ministry of Health Analysis the SINASC data for verifying the occurrence of low birth weight in Brazil as well as establish the spatial inequalities in the country.7

The weight of the baby at birth is strongly associated with the risk of dying in the first year of life and to a lesser extent, with development problems in childhood, as well as increased likelihood of various diseases in adulthood, controlling or not for gestational age, the proportion of low birth weight is also the most commonly used indicator to assess the care prenately.8

Insufficient growth in children born with extremely low birth weight may result from diseases which are more susceptible, such as chronic lung disease and cerebral palsy, the first being the main driver of growth failure between 40 weeks to 4 months old, and the second, 8 to 20 months old. However, the period in which there is greater growth deficit (between 4 and 8 months), is not associated with co-morbidities. During this period, the fact of being born with the lower standard weight is seen as the main determinant for failure in weight gain of these babies.9

It is well established that very small children born and premature creation and lower chance of survival, have smaller chances of an adequate neuropsychomotor development. The mental and motor development of children with low birth weight remains lower at 24 months, demonstrating the importance of birth weight in development. Added to this, the BPN is one of the main agents of nutritional risk at the end of the first year of life, and to adopt strategies for its reduction and prevention.10

Combined with the precision of specific interventions to approximate birth weight, the recommended average highlights the need to reduce the negative nutritional consequences and carry out the control of adverse environmental factors such as infection prevention, in order to optimize health and nutrition children and establish a better physical growth in the future.11

From the above it is clear the gravity of the BPN problematic, particularly with regard to knowledge of the prevalence of low birth weight, since it allows the development of actions to promote health and disease prevention, contributing to the formation of
METHOD

This is a field study, descriptive, exploratory, retrospective and documentary with a quantitative approach, held in a public hospital in the municipality of Chapadinha/MA. Data were collected from medical records of children born in the period from December 2011 to January 2012, with intentional sample, non-probabilistic, consisting of 52 records.

Data collection was used with a protocol form with closed questions after reading the records, the card was filled out, which was transcribed data that contemplated the proposed objectives of the study. The data were analyzed and presented by means of a figure and two tables drawn up with the help of Microsoft Excel 2007 program.

The study followed determinations recommended by Resolution No. 466/12 of the National Health Council (CNS), which regulates research involving human subjects and was approved by the Research Ethics Committee of the University Center of Maranhão/UNICEUMA, CAAE No. 11120713.4.0000.5084.13

RESULTS AND DISCUSSION

The following search results will be demonstrated through tables and graphics with further analysis and discussion. The data presented in Tables 1 and 2 incorporate relevant information about the sample studied, in which characteristics are observed related to some sociodemographic variables.

According to Table 1, these mothers, 61,5% were between 18 to 25 years old, where 73.1% had primary education, and 53.8% were single.

The mother’s marital status was presented sequentially, from 53.8% were single, 30.0% stable union and 15.4% married a greater association with LBW. Similarly, other studies have shown that unmarried mothers risk categories shall be considered to have children with low birth weight, due to the increased risk of emotional and financial instability, which can compromise the woman's well-being and consequently affect the healthy course of pregnancy.14

Schooling influences the quality of prenatal care, the accession of perinatal care. It was found in the course of information on the education that mothers illiterate had 2.2 times greater probability of presenting LBW.15

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Table 1. Distribution of children born in a public hospital in the city of Chapadinha – MA in December 2011 and January 2012, according to the sociodemographic profile of the mothers. São Luís, 2013.

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 18</td>
<td>12</td>
<td>23,1</td>
</tr>
<tr>
<td>18 - 25</td>
<td>32</td>
<td>61,5</td>
</tr>
<tr>
<td>26 - 30</td>
<td>8</td>
<td>15,4</td>
</tr>
<tr>
<td>Schooling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary Education</td>
<td>38</td>
<td>73,1</td>
</tr>
<tr>
<td>High School</td>
<td>14</td>
<td>26,9</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>8</td>
<td>15,4</td>
</tr>
<tr>
<td>Single</td>
<td>28</td>
<td>53,8</td>
</tr>
<tr>
<td>Stable Union</td>
<td>16</td>
<td>30,8</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 2. Distribution of children born in a public hospital in the municipality of Chapadinha - MA in December 2011 and January 2012, according to the maternal risk factors for low birth weight. São Luís, 2013.

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of prenatal consultations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never did</td>
<td>15</td>
<td>28.8</td>
</tr>
<tr>
<td>&lt; 6 consultations</td>
<td>35</td>
<td>67.4</td>
</tr>
<tr>
<td>7 or +</td>
<td>02</td>
<td>3.8</td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>28</td>
<td>53.8</td>
</tr>
<tr>
<td>No</td>
<td>24</td>
<td>46.2</td>
</tr>
<tr>
<td>Parity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>08</td>
<td>15.4</td>
</tr>
<tr>
<td>1 - 3</td>
<td>29</td>
<td>55.8</td>
</tr>
<tr>
<td>+ than 3</td>
<td>15</td>
<td>28.8</td>
</tr>
<tr>
<td>Type of birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>35</td>
<td>67.3</td>
</tr>
<tr>
<td>Cesarean</td>
<td>17</td>
<td>32.7</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2 shows that 67.4% of mothers performed fewer than six consultations, 53.8% claim to be smokers, 55.8% had 1 to 3 children, while 67.3% had normal birth.

They found that risk factors occurs in preterm women under 18 and those who did not attend prenatal program, or performed incompletely.\(^{17}\)

In a study conducted in São Paulo (SP), it was also found that mothers who made less than five consultations during pregnancy had a relative two and half times higher risk of low birth weight than those who returned to prenatal five or more.\(^{18}\)

There is an association between low quality of prenatal care and the birth of small for gestational age, suggesting that in addition to adequate number of queries, one should also seek an improvement in the quality of care provided.\(^{19}\) The rates of newborns with low weight twice higher among smokers than among nonsmokers.\(^{20}\)

In relation to the rate, one can notice a similar frequency to the findings in research and literature, but this association requires further study, which suggests that the risk factor that stands out is the low frequency consultations during the prenatal period.

![Figure 1](image_url)

Figure 1 shows that 54% were male children, while 46% were female. One study showed that the association between female newborns and LBW found (58%) could be explained by a large proportion of small for gestational age infants in the population between LBW infants. This is because the female has an important causal effect and well established for intrauterine growth retardation, both in developed countries and in developing.\(^{21}\)
According to Table 3, 46% of these children were among 2,500-3000g, 50% had to be eutrophic and 15% with low birth weight.

BPN, which may be due to prematurity or intrauterine growth retardation, has been the subject of several studies due to important role in child mortality and morbidity and health risks in adulthood. It was found that 58% of children born with less than 2,500g at increased risk of death in the first year of life, of developing infectious and respiratory diseases and have postponed growth and development. Furthermore, studies suggest that these children may, in the future, to cardiac diseases, stroke, hypertension, type 2 diabetes, hyperlipidemia and obesity.

The assessment of nutritional status of a group of 76 children showed a higher percentage of normal weight (68%) and a very low frequency of risk/overweight (18%). The findings in the present study corroborate the literature and their percentage alert to monitor the consequences of low weight at birth.

CONCLUSION

The data of mothers showed that 61,5% were between 18 to 25 years old, where 73,1% had primary education, and 53,8% were single; 67,4% of the mothers had less than six visits, 53,8% claim to be smokers, 55,8% had 1 to 3 children, while 67,3% had normal birth; of these children, 54% are male; 46% of these children were among 2,500-3000g and 15% had up low birth weight (LBW).

Regarding the number of prenatal consultations it have been less than the minimum recommended by a significant percentage of women surveyed. One cannot say that quality is measured by the amount of the same; however, the greater the number of queries certainly facilitates the identification of complications, thus contributing to a prenatal quality and minimization of consequences for both the mother and son.

Knowledge of the prevalence of low birth weight, as well as the nutritional status of these children early in life, admits the development of actions to promote health and disease prevention, cooperating in the formation of public policy, awareness to the population and social participation, in order to make minimum the diseases associated with it.

It emphasizes the importance of early capture of pregnant women for prenatal care and identification of risk factors for LBW. It is necessary for health policies for the mother and child are extended to the family, so that it encourages women to live this moment fully and so that spending on child sequelae at risk of death, can be minimized.

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Fernandes ACCF, Carvalho e Martins MC de, Santos RS et al.


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Corresponding Address
Francisca das Chagas Gaspar Rocha
Rua do Aririzal
Edificio Valencia II / Ap. 203 / Bloco 07
CEP 65076370 - São Luís (MA), Brazil