

## SLEEP CHARACTERISTICS IN CHILDREN IN THE ISOLATED RURAL AFRICAN-BRAZILIAN DESCENDANT COMMUNITY OF FURNAS DO DIONÍSIO, STATE OF MATO GROSSO DO SUL, BRAZIL

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**ABSTRACT** - Developmental and cultural factors affect sleep habits in childhood. The objective of this research was to determine sleep habits of children in the isolated rural African-Brazilian community of Furnas do Dionísio, Mato Grosso do Sul, Brazil. The members of this community are closely related descendants of the ex-slave Dionísio, and remained in relative geographical isolation for about a century. Sleep characteristics of 55 children (35M; 20F), 2 to 10 year olds, were evaluated in interviews with their mothers. The results showed that cosleeping, in the same bed with family members, was present in 80.0% of the 2-3 year olds; decreasing to 25.0% of the 8-10 year olds. Only 5.4% of the children slept alone in their own bedroom. Mean number of persons per bedroom was 2.8. Only 7.0% of the bedrooms had TV; 98.1% slept in silence. The data obtained support the need to weigh cultural factors influence on sleep.

**KEY WORDS:** sleep, sleep habits, child, African-Brazilian, Negro, Black, Furnas do Dionísio, Mato Grosso do Sul.

### **Características do sono da criança na comunidade negra rural isolada de Furnas do Dionísio no Mato Grosso do Sul**

**RESUMO** - Hábitos de dormir da criança sofrem influências fisiológicas e culturais. O objetivo desta pesquisa foi verificar os hábitos de dormir da criança da comunidade negra rural e isolada de Furnas do Dionísio, no Mato Grosso do Sul. A comunidade é composta dos membros de uma mesma família, descendentes do ex-escravo Dionísio, mantida por cerca de um século em isolamento geográfico relativo. As características de 55 crianças (35 M; 20 F), de 2 a 10 anos de idade, foram pesquisadas através de entrevistas com as mães. Resultou que o hábito de dormir junto (*cosleeping*) estava presente em 80,0 % aos 2-3 anos; reduzindo a 25,0 % aos 8-10 anos. Apenas 5,4% dormiam sozinhas em seu quarto. A média de pessoas por quarto foi 2,8. Apenas 7,0 % dos quartos tinham televisão; 98,1% eram silenciosos. Os resultados apóiam a necessidade de determinar a influência de fatores étnicos no sono.

**PALAVRAS-CHAVE:** sono, hábitos de dormir, infância, afro-brasileiro, negro, Furnas do Dionísio, Mato Grosso do Sul

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Sleep habits during childhood are influenced by developmental, cultural and environmental factors<sup>1-10</sup>. The Black community of Furnas do Dionísio, located in the municipality of Jaraguari,

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Mato Grosso do Sul, Brazil, presents the particular characteristic of remaining relatively geographically isolated, being made up of inter-related descendants of an ex-slave. In many ways, their living habits and customs remained unchanged for over a century. We have no knowledge of previous literature on child sleep patterns in rural isolated African-Brazilian communities. This research analyzes children's sleep habits in this rural isolated Black community. It is part of a broader project which we have systematically been engaged, in an effort to understand socio-cultural factors that affect sleep<sup>4-5,7-9</sup>.

## METHOD

The isolated Black community of Furnas do Dionísio is composed of the descendants of an ex-slave, Dionísio Antônio Vieira, who settled in the region about a century ago. It remains relatively geographically isolated, in a difficult to reach valley, 57 km from Campo Grande, Mato Grosso do Sul. There are about 190 people in the community, all Black, descendants of the same family, now in the fourth generation. The living habits of these small farmers remain largely unchanged. Their homes are far from one another, with no villages in between.

Fifty-five children ( 35 M; 20 F) - 2 to 10 year olds - were evaluated. Mean age was of 5.2 years (Table 1). Sleep characteristics were approached through interviews with the mothers in the Summer of 1999 (January). Interviews were personally performed by the authors. Furnas do Dionísio is located in the municipality of Jaraguari, Mato Grosso do Sul. The interviews were carried out with all children in this age range, with no exception. As the houses are scattered in a wide rural area, the interviews were performed in four strategic places, i.e., the two schools, the nurse station and the patriarch's home. The population was previously advised by local leaders and attended in large number to the interviews.

Sleep habits were evaluated through eleven multiple choice questions, and three discussion-type questions, focusing primarily on the habit of sleeping with other people (cosleeping) and on bedroom conditions.

## RESULTS

The homes were far apart from each other, located on small farms. They were typical farmhouses built of bricks and wood, with several separated bedrooms per home and an enlarged family-living in each.

It was observed that 36.3% of the children sleep alone (Table 2). Cosleeping (in the same bed) with family members was found in the remaining 63.7% of the children. Most frequently they slept with their mothers, or fathers, sisters, brothers, grandmothers and grandfathers, in this order.

It was noted that cosleeping was predominant in the younger children, as 20.0% of the 2-3 year olds sleep alone; 25.0% of the 4-5 year olds sleep alone; 33.3% of the 6-7 year olds sleep alone; and 75.0% of the 8-10 year olds sleep alone.

The mean number of people per bedroom was 2.8; the maximum was 4 people in a bedroom.

The mean number of beds per bedroom was 1.8; the maximum was 3 beds in a bedroom.

*Tabela 1. Distribution of children according to age, in Furnas do Dionísio.*

Age (years)	Male	Female
2-3	12	3
4-5	11	5
6-7	7	5
8-9	4	4
10	1	3
Total	35	20

Only three children (5.4%) were used to sleeping alone, with no one else in the bedroom.

The vast majority of children (96.3%) slept at night on beds with mattresses. Only two children ( 3.6%) slept in a woolen hammock. No other type of bed or mat was used. Every child evaluated had industrialized bedlinen and blankets. No child was found covered with animal hide or other means.

Table 2. Sleep characteristics of 2 to 10 year olds children in Furnas do Dionísio.

	N	%
Sleeps alone	20	36.3
Sleeps with		
mother	14	25.4
father	11	20.0
brother	8	14.5
sister	8	14.5
grandfather	1	1.8
grandmother	4	7.2
others	2	3.6
In the bedroom		
TV	4	7.2
radio	16	29.0
quiet	54	98.1
noise	1	1.8
Bedroom temperature		
pleasant	29	52.7
too cold		
too warm	26	47.2
Total	55	100.0

Electric lighting was found in the homes of 53 evaluated children (96.3%). Oil lamps were present in only two homes (3.6%). Gas candles and such likes were not found.

Radios were found in 29.0% of the children's bedrooms and TV's in 7.2%. TV and radio sets were common in the homes, usually a single set per bedroom. Having both a TV and a radio set in the same bedroom was unusual, but was found in one home with two children.

Almost every mother (98.1%) described the child's bedroom as quiet; only one mother reported noise due to the home refrigerator motor.

In 52.7% of the sample, bedroom temperature was described as pleasant; 47.2% described it as too warm, and none considered it too cold. It must be remembered that the interviews were carried out in the summer.

In considering if care taken in putting the child to sleep varied according to age, it

was noted that only one family gave more attention to the sleep care in the younger of two children. Despite trying to detect these differences, none were found due to gender or social status.

## DISCUSSION

The history of Furnas do Dionísio was told us by its patriarch, Sebastião Abadio Martins, grandson of Dionísio Antônio Vieira, the founder. It was also told us by other family members, and has been published<sup>11</sup>. Soon after slavery abolition took place in Brazil, in 1888, Dionísio, an ex-slave from the rural region of Minas Gerais, traveled to Mato Grosso, in search of free land and protection. Due to travel hardships, it took him four months to get there. At that time, that vast region of Brazil was still widely uninhabited. Dionísio settled in a deep forest, located in a valley that is still difficult to reach.

He raised his family isolated, and for four generations, the family continues to grow relatively isolated, as rural small, self-sufficient farmers. Several of the cultural habits of this community have maintained for about a century, such as their manner in raising and processing sugar cane and manioc, as well as their traditional music (*catira*) that has long vanished in the region.

It must be stressed that this Black community is often mistaken for *quilombo*<sup>11</sup>. The *quilombos* were also isolated rural Black communities, but primarily of fugitive slaves. However, Furnas do Dionísio differs from a *quilombo* to some extent because it was initiated by an ex-slave, immediately after abolition took place.

A main concern to this community today is that several young people - attracted to urban centers - are leaving it. This exodus resulted in a smaller number of children in the community.

Cosleeping (in the same bed) with family members was found in two thirds of the children, occurring more in the early years. This pattern differs from what we found in studies with Native

Brazilian Terena<sup>7,9</sup> and Bororo<sup>8</sup> children, in which cosleeping is a major typical trait, found in every child up to about their ten years of age.

The pattern of cosleeping in Furnas do Dionísio is also different from patterns found in western urban culture and in Asian studies<sup>4,5,12-17</sup>, in which cosleeping is unusual and is even culturally dissuaded<sup>10,14,15,18-24</sup>. The number of beds per bedroom and number of persons per bedroom is closer to the urban pattern, in which individual beds and bedrooms are emphasized<sup>14,15,19-22,25-27</sup>. It is certainly less than we observed in Native Brazilian Terena<sup>7,9</sup> and Bororo<sup>8</sup> children that share bedrooms with numerous beds and people of the same family sleeping in the same bedroom. Our present data of Furnas do Dionísio supports the theory that these sleep patterns are definitely culturally rooted<sup>7-9</sup>.

Among the predominant characteristics of this group of children, are the use of beds with mattresses, industrialized bedlinen and blankets, as well as electric lighting. The vast majority of evaluated children are not exposed to TV or radio in their bedrooms. The bedroom is predominantly described as silent, being favorable to the child's sleep<sup>3,23,27</sup>. Bedroom temperature was described as pleasant by half of the children, while the other half complained it was too warm.

In the group observed, it was noted that the mothers care for their youngster's sleep, putting the child to sleep with an effort to provide the most adequate possible environment, with sleeping clothes, and family care. No important differences in child sleep care were observed due to age range, gender or social position.

## CONCLUSIONS

Sleep patterns in ages ranging from 2 to 10 year olds studied by us in the isolated rural Black community of Furnas do Dionísio have quite distinct characteristics. Cosleeping with family members was the predominant pattern in 2-3 year olds - including two thirds of them - but decreased and was present in only one fourth of the 8-10 year olds. The typical pattern is of a small number of persons per bedroom, but the children do not sleep completely alone in their bedroom. TV and radio sets are usually not found in the bedroom, which is described almost always as silent. These are all bedroom characteristics known to be favorable for better sleep. Half of the children interviewed had their bedroom temperature reported as pleasant, while the other half felt it too warm in the summer. The results presented support the need to consider the ethnic, socioeconomic and environmental influences for a better understanding of these children's sleep pattern<sup>2,28-30</sup>.

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