Characterization of families of children admitted in a burning treatment center

ABSTRACT

Objective: to describe the characteristics of the family nucleus of children hospitalized for burnings. Method: exploratory and descriptive study, with qualitative approach, with 16 families of children who were victims of burnings and admitted in the Burning Treatment Center. Data were presented in figures and discussed in accordance with the literature. The study had its research project approved by the Ethics Research Committee of the institution with the Opinion number 03884/08. Results: families came from the countryside (Ceará), they are characterized as extensive nuclear family; its members had little schooling. The accident happened within the home, in the kitchen; the age group affected was 1-5 years and, as the causal agent, we found the super-heated liquid. Conclusion: there is a vulnerability to accidents within the own residence of the child, showing the need to use strategies of Health Education, for that the families can reflect on the occurrence of burnings in children. Descritores: Child; Family; Burnings; Anthropology.

RESUMO

Objetivo: descrever as características do núcleo familiar de crianças internadas por queimaduras. Método: estudo exploratório e descritivo, de abordagem qualitativa, com 16 famílias de crianças vítimas de queimaduras e internadas no Centro de Tratamento de Queimados. Os dados foram apresentados em figuras e discutidos com a literatura. O estudo teve o projeto de pesquisa aprovado pelo Comitê de Ética e Pesquisa da instituição, parecer de número 03884/08. Resultados: as famílias vinham do interior do estado (Ceará), caracterizaram-se como família nuclear extensa; seus membros possuíam baixa escolaridade. O acidente aconteceu dentro do lar, na cozinha; a faixa etária atingida foi de 1 a 5 anos e, como agente causal, encontra-se o líquido superaquecido. Conclusão: existe uma situação de vulnerabilidade para acidentes dentro da própria residência da criança, mostrando a necessidade de utilização de estratégias de Educação em Saúde, para que as famílias possam refletir sobre a ocorrência das queimaduras em crianças. Descriptores: Criança; Família; Queimaduras; Antropologia.
INTRODUCTION

Burns are serious injuries that have contributed, in a marking form, with the growth of statistics of accidents involving children, due to the immaturity of infants to evaluate the danger in their daily lives. Studies performed in Brazil have showed that 50% of accidents involving children under 7 years occur within their own home, of which 48.9% are in the kitchen. In Latin America, epidemiological studies conducted in Argentina, Chile, Colombia, Cuba, Dominican Republic and Venezuela highlight the accidents with children in the home environment, and the super-heated liquids are the most common causal agents.

At the moment of attendance of the burned children, the professionals who receive them are focused on the care of the injury, ease the pain and the physiological changes existing due to the burning; realizing an assistance aimed at healing, forgetting the importance of family adherence in the treatment and recovery of the child.

Everyday life in the service of burned shows the fragility of the team for leading situations that involve family conflicts, and cultural values of those families or taboos regarding burning and, especially, the creation of strategies to reintegrate the victims to their families and the community are not being discussed.

During the hospitalizations it should be realized that the family nucleus is targeted abruptly, needing support and guidance from professionals, in order to try to minimize the limitations imposed by the socioeconomic and cultural conditions of the families. The nursing staff, to be closer to the children and their families during hospitalization, "feel the weight" of the changes through which they these people pass for, and in these routine, identifies the suffering, the anguish of the fathers, mothers and relatives by seeing their children connected to devices and undergo treatments such as dressings under anesthesia, surgeries, frequent venipunctures and repeated polls.

Considered as the basic unit for the health, family assumes responsibilities for the health of its members, bringing their beliefs, values, vulnerabilities and habits, particularly in relation to the children, to the hospital environment, where the nursing care must valorize the knowledge acquired through culture and interactions with social support networks. Reinforcing this assertion some studies on burnings argue that admissions for burnings in children cause family alterations from the time of the accident until the return to home.

The importance of family along with the sick child, which increasingly takes on the responsibility of caring for its members, is unquestionable, highlighting the need for professionals who care for this child be prepared for: guide, supervise, facilitate and provide such cares; and the nurse is the main responsible in this process of co-responsibilities.

The family members of burned children show stress situations which are characterized by three phases: indecision, intensification of pre-existing conflicts and feeling of guilt, which may influence the clinical evolution of the victim, requiring the integration of the professionals, the child and its family to the successful of treatment.

Accordingly, the nursing has features capable of performing the integral promotion of the health of families; because it is directly involved in the process of caring for individuals and this permeates the levels of complexity, whether in primary, secondary or tertiary care.

By exercising care for middle and / or high complexity, the nurse must understand the importance of dialoguing on strategies and possibilities of prevention of accidents involving children, also valorizing the hospital environment.

The need of the family members participate in the care of children hospitalized for burnings is always a challenge for the nursing staff and family, because it is a time of grief and guilt, however at this point, it opens up a range of opportunities for the teaching-learning process, in the sense of sensitize the caregiver to develop the care in a different manner, and further make it a multiplying agent in the prevention of future accidents with burnings.

This study was part of a wider research that studied how the family culture intervenes in the care for children who were victims of burnings. Considering the above mentioned, the objective is:

- Describe the characteristics of the family nucleus of children hospitalized for burnings.
- Characterize the types of burnings suffered by the hospitalized children.

METHOD

This is an exploratory and descriptive study, with qualitative approach. It is characterized as ethnographic research carried out in a Hospital of Urgency and Emergency of the Municipality of Fortaleza.
CE, Brazil, which receives patients from all over the state, with different traumas and situations that require attendance with urgency and emergency, such as: multiple trauma, traumatic brain injury, exogenous poisoning, burnings, among others; it is a reference to care for burnings, equipped with a Burning Treatment Center - Centro de Tratamento de Queimados / CTQ as well as field of research to students of graduation, post-graduation and health professionals of the State.

The study participants were 16 families of children, who were victims of burnings, admitted to the Burning Treatment Center, in the months of April and May 2008. They agreed to participate and signed a Free and Informed Consent Form.11

Data collection was like investigation line the ethno-nursing, using as a guide a field diary and the ethnographic interview, which was comprised by the following guiding questions: how the child got burned? How many people live with the child? Would you like to talk about your family?

Before starting the interview, one of the authors maintained previous contacts with the family at the hospital environment, aiming to build bonds with these families, focusing on child and caregiver; the interviews were recorded, transcribed, and performed before the hospital discharge of the child. For preserving the identity of these families, we allocated to them the letter F, followed by numbers according to the chronological order of hospitalization during the period of the research.

Data analysis was performed in a qualitative manner, as required by ethno-nursing, following these steps below: collection of records and documents; grouping of data stored in a field diary; contextual analysis or standard; and identification of main themes, research findings, theoretical formulations and recommendations.12 The data were presented in figures and discussed regarding the literature pertinent to the study object.

We followed the ethical standards in research with human beings at all stages of the study, grounded by Resolution nº 196/96.11 The project was approved by the Ethics Research Committee of the institution where the study was performed, with the Opinion of the number 03884/08.

**RESULTS**

To facilitate the visualization and understanding, two pictures were built; the first shows the socioeconomic and demographic characteristics of families and the second characterizes accidents by burnings.

The Figure 1 shows that from the families of children admitted to the Burning Treatment Center during the study period, eight had more than four members, two with ten (F8) and twelve (F11) people. The demographic density per household is equal or higher than six people, in eight (50%) of these families. The origin of the families was: from the Capital, metropolitan region and from the countryside of state of Ceará.

With regard to the family income, the interviewees could not inform the value in Reais(RS) and just said:

>This is value of the “Bolsa Escola” of my boys. (F1, F2, F6 e F12)

It is noteworthy to note that most of them reported about a family income of up to two minimum wages. These values can be associated with the professions of the heads of the families, whose predominance was

### Table 1. Ratio of families of children hospitalized in the CTQ with the number of members, origin, family income and occupation of the head of the family. Fortaleza, April-May 2008. (*) In number of people. (**) MW = Minimum Wage (value at the time of the study - R$ 465.00).

<table>
<thead>
<tr>
<th>Family</th>
<th>Members*</th>
<th>Origin(city)</th>
<th>Family Income (MW)**</th>
<th>Occupation of the head of the family</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>08</td>
<td>Pentecoste</td>
<td>Unanswered</td>
<td>Grower</td>
</tr>
<tr>
<td>2</td>
<td>06</td>
<td>Maracanaú</td>
<td>Unanswered</td>
<td>Retired</td>
</tr>
<tr>
<td>3</td>
<td>04</td>
<td>Fortaleza</td>
<td>Two</td>
<td>Vigilant</td>
</tr>
<tr>
<td>4</td>
<td>06</td>
<td>Fortaleza</td>
<td>One and a half</td>
<td>Doorkeeper</td>
</tr>
<tr>
<td>5</td>
<td>03</td>
<td>Maranguape</td>
<td>One</td>
<td>Caretaker/housekeeper</td>
</tr>
<tr>
<td>6</td>
<td>08</td>
<td>Fortaleza</td>
<td>Unanswered</td>
<td>Cleaning lady</td>
</tr>
<tr>
<td>7</td>
<td>04</td>
<td>Fortaleza</td>
<td>Two</td>
<td>Mason</td>
</tr>
<tr>
<td>8</td>
<td>10</td>
<td>Acarape</td>
<td>One</td>
<td>Pedlar</td>
</tr>
<tr>
<td>9</td>
<td>06</td>
<td>Cascavel</td>
<td>One and a half</td>
<td>Mason</td>
</tr>
<tr>
<td>10</td>
<td>03</td>
<td>Fortaleza</td>
<td>Three</td>
<td>Trader</td>
</tr>
<tr>
<td>11</td>
<td>12</td>
<td>Acaraú</td>
<td>One</td>
<td>Grower</td>
</tr>
<tr>
<td>12</td>
<td>04</td>
<td>Caucaí</td>
<td>Unanswered</td>
<td>Unemployed</td>
</tr>
<tr>
<td>13</td>
<td>06</td>
<td>Caucaí</td>
<td>Two</td>
<td>Mason (grandfather)</td>
</tr>
<tr>
<td>14</td>
<td>05</td>
<td>Horizonte</td>
<td>Two</td>
<td>Machine Worker</td>
</tr>
<tr>
<td>15</td>
<td>05</td>
<td>Fortaleza</td>
<td>Five</td>
<td>Trader</td>
</tr>
<tr>
<td>16</td>
<td>03</td>
<td>Sobral</td>
<td>Three</td>
<td>Mechanic technician</td>
</tr>
</tbody>
</table>
informal work or even the unemployment. Of these families, only three (F10, F15 and F16) had income higher than two minimum wages. In this research, the occupations of the heads of the families are jobs that require little schooling; it is proven in some speeches: I do not know read, nor write. (F1) I studied only the primary. (F8) I never studied, simply not. (F10)

The male figure is highlighted as the head of the family, being the father or grandfather the only ones providers of the family. In Figure 2, we can see that the accident with burnings prevailed in the child’s residence in 15 of the 16 occurrences; inside the residence, the kitchen was the locus of all burnings, with only one case occurred in the backyard of the residence (F11). The age group of the children admitted, in months, was between 9 and 108 months, children with an average age of 30 months and a half, i.e., three years were predominant.

The kids were in the kitchen, often, near the stove and, at the time of the accident, always had a family member on the place; it is revealed in the following speeches:

He came running - kidding - then he hit the table and hit his head on the pot that was on the fire, so tipped it over him. (F1) He went up in the cabinet next to the stove, hit and tipped over the pot of hot water on him, I got desperation. (F6) I did not see, I cannot explain it very well, but I think that this table is with its top lost. (F9)

In this study, the kitchen was identified as the place where children are more exposed to the burnings. Families reported that they had no idea of the accidents for which the small children are exposed and they used to make food or coffee with the kids right next to the stove.

Some mothers perceived the risks only after the accident and considered the kitchen as a place of danger to their children.

He pulled the pot of coffee that was on the table. (F3) When I’m cooking on the stove, he cannot go because it’s dangerous. (F6)

Accidents by hot liquids were the most common, being characterized as scalding; water is the main heat agent, followed by the foods, especially the coffee that is culturally very consumed by the population in all regions of the State of Ceará.

In this type of accident various parts of the body are affected, the liquid flows often in the direction cephalous-caudal and as the smaller the infant the greater will be the severity of the accident, due the smaller surface of the body.

As for the extent, the burned body area of the children were more than 15%, the most common lesions were those of second degree; leading to an hospitalization average of 10 days of and a half.

The Figure 2 also shows the role of the mother in the provision of child care. In the most of cases, they were the caregivers of the children; remained in the entire hospitalization period, with the exception of two families: one mother showed disturbs of behavior and, the grandmother had to care for the child (F1); on the other case, the mother got sick and the stepfather replaced her (F9).

<table>
<thead>
<tr>
<th>Families</th>
<th>Location of Occurrence</th>
<th>Age (months)</th>
<th>Causal Agent</th>
<th>BBS (%)</th>
<th>Severity (degree)</th>
<th>Tempo of admission (in days)</th>
<th>Key Informant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kitchen</td>
<td>72</td>
<td>Bean Soup</td>
<td>26</td>
<td>2°</td>
<td>32</td>
<td>Mother and Grandmother</td>
</tr>
<tr>
<td>2</td>
<td>Kitchen</td>
<td>24</td>
<td>Hot Liquid</td>
<td>26</td>
<td>1° e 2°</td>
<td>07</td>
<td>Mother</td>
</tr>
<tr>
<td>3</td>
<td>Kitchen</td>
<td>12</td>
<td>Hot Liquid</td>
<td>11</td>
<td>2°</td>
<td>08</td>
<td>Mother</td>
</tr>
<tr>
<td>4</td>
<td>Kitchen</td>
<td>12</td>
<td>Hot Liquid</td>
<td>14</td>
<td>2°</td>
<td>07</td>
<td>Mother</td>
</tr>
<tr>
<td>5</td>
<td>Kitchen</td>
<td>24</td>
<td>Hot Coffee</td>
<td>12</td>
<td>2°</td>
<td>20</td>
<td>Mother</td>
</tr>
<tr>
<td>6</td>
<td>Kitchen</td>
<td>72</td>
<td>Hot Liquid</td>
<td>12</td>
<td>2° e 3</td>
<td>26</td>
<td>Mother</td>
</tr>
<tr>
<td>7</td>
<td>Kitchen</td>
<td>12</td>
<td>Hot Liquid</td>
<td>10</td>
<td>2°</td>
<td>09</td>
<td>Mother</td>
</tr>
<tr>
<td>8</td>
<td>Kitchen</td>
<td>12</td>
<td>Hot Liquid</td>
<td>34</td>
<td>2°</td>
<td>28</td>
<td>Mother and Stepfather</td>
</tr>
<tr>
<td>9</td>
<td>Kitchen</td>
<td>108</td>
<td>Hot Coffee</td>
<td>15</td>
<td>2°</td>
<td>21</td>
<td>Mother and Sister</td>
</tr>
<tr>
<td>10</td>
<td>Kitchen</td>
<td>24</td>
<td>Hot Liquid</td>
<td>27</td>
<td>2°</td>
<td>25</td>
<td>Mother</td>
</tr>
<tr>
<td>11</td>
<td>Kitchen</td>
<td>60</td>
<td>Fire</td>
<td>10</td>
<td>3°</td>
<td>25</td>
<td>Mother</td>
</tr>
<tr>
<td>12</td>
<td>Kitchen</td>
<td>12</td>
<td>Hot Coffee</td>
<td>12</td>
<td>2°</td>
<td>20</td>
<td>Mother</td>
</tr>
<tr>
<td>13</td>
<td>Kitchen</td>
<td>11</td>
<td>Porridge</td>
<td>16</td>
<td>2°</td>
<td>22</td>
<td>Mother</td>
</tr>
<tr>
<td>14</td>
<td>Kitchen</td>
<td>12</td>
<td>Hot Liquid</td>
<td>18</td>
<td>2°</td>
<td>23</td>
<td>Mother</td>
</tr>
<tr>
<td>15</td>
<td>Kitchen</td>
<td>12</td>
<td>Hot Cooking Oil</td>
<td>15</td>
<td>2°</td>
<td>12</td>
<td>Mother</td>
</tr>
<tr>
<td>16</td>
<td>Kitchen (told by grandmother)</td>
<td>9</td>
<td>Hot Coffee</td>
<td>26</td>
<td>2°</td>
<td>33</td>
<td>Mother</td>
</tr>
</tbody>
</table>

Figure 2. Characterization of the accident in children who were victims of burnings, considering the location, age, causal agent, burned body surface (BBS), severity, time of admission and key informant. Fortaleza, April-August 2008. (*) = Hot Liquid = Water.
The male presence as caregiver of the child occurred in only one family (F9); the stepfather was for some days like an escort for his stepdaughter. Parents of other children just came in the visitation time with other family members such as: uncles, aunts and grandparents.

The decrease in contact with friends is caused by the fact that the families, especially the maternal figure, get engaged with more intensity to the child cares, leaving a little aside their friendship relations. These mothers start to have a greater coexistence with the health professionals that are directly related to the child cares.13

**DISCUSSION**

With regard to the ethnographic study performed with families of children admitted in a Burning Treatment Center, the findings related to the number of family members go against the trends of reduction in family size, because according to the Social Indicators of the Nucleus of Studies and Surveys on Demographic and Socioeconomic Information - IBGE, the Brazilian family organizations are changing, mainly due to the cultural changes that have occurred in recent years, new types of family arrangements are among them and, especially, they are reducing their sizes.14

There was a cluster of people, especially of children, in the families studied, leading to a greater risk of accidents with burnings, because it becomes difficult for the caregiver for observing these infants and, often, the responsible for them ends up allowing children to get into the kitchen.2

The lack of a Specialized Center in Burns and lack of qualified professionals favor the transference of the child and his nearest relative to the Capital. Data from the Institute Pro-burned (Instituto Pró-queimados), (2010) highlight only seven Specialized Centres in burnings in the Northeast Region of Brazil, where all meet in the capitals of these states, leading to a large number of attendances, mostly in victims from the countryside.15

Study evaluating social indicators showed that family units who perceive insufficient income to meet their needs (health, education, housing, etc.) live in a vulnerable situation with regard to the welfare of its members, which reaffirms the idea that the social determinants influence the distribution of health and disease in a society.16

The inequality of family income remains in the Brazilian society, especially in the Northeast region, and the children are the most affected. Data from IBGE show that, in this region, 44.1% of children live in families with very low income.17

The effects of schooling level are manifested in many different forms and they are related to disease prevention and health promotion. According to the report of the National Commission on determinants in health, income and schooling are strongly associated with health outcomes and life expectancy.18

The type of family arrangement identified in the study can be named of secondary extensive nuclear family, in which we find the main family (father / mother) and another comprised by son / son in law / daughter / grandchild.14 It is believed that this contingent is the result of aggregations; some children get married or have children and continue residing in the same house, characterizing new families.

The data shown (Figure 2) confirm the execution of epidemiological studies on burnings in children, which show that accidents in the range of 1 to 5 years occur in the kitchen and in the presence of an adult, the super-heated liquid is the primary causal agent.2,3 Studies reaffirm that the kitchen is one of the most dangerous places for this age group because these children do not know how to distinguish the risk of pulling the pot or even from the stove.15–9

Researches on etiology of burnings show that 70% of burnings in children are caused by scalding. These types of burnings, usually, have a good prognosis and, even that in some cases the time of admission is extended, the sequels are more psychological than physical,20 meeting the literature.

It is consensus in studies on burned child that those younger than 10 years and which present more than 10% of their body burned; or with deep burns on more than 5% of burned body surface; or burnings in special areas (face, hands, feet and genitalia), or burnings associated to pathologies of basis and inhalation injury should be treated in specialized centers for burnings.21

The need for hospitalization is clear by the characteristics of burnings of the children attended during the study period. The family of the child must have understanding of the severity of the accident and the clinical changes that are common to the thermal trauma, so you can comfort and help in performance of the treatment. Thus, the nurse must use the listening of the doubts, concerns and aspirations as a strategy for that the family become an ally in the process of victim care.
It can be seen that even with the inclusion of females in the labor market, nowadays, the woman is still the greater caregiver of the family, whether in playing the role of mother, sister or grandmother, reinforcing the historical and cultural perpetuation of attribution of this responsibility to this genre. Thus, society places the female gender as responsible for raising their children and that the mother-woman must always remain close to their children, taking care of their children. The participation of the father in the process of child hospitalization is little common among families, due to the fact that quality of financial provider of families was given to the men.

**CONCLUSIONS**

The research allowed for characterizing the families and children treated at a center of references in burnings. It was also possible to identify the economic, social and family situation of the children, in which, we viewed a situation of vulnerability to accidents inside their own residences, showing the need for use of the Health Education, in the sense that people can reflect on their own behavior that favors the occurrence of burnings in children who are totally dependent on the care of a responsible adult.

Most children are from rural areas, necessitating transference to the city of Fortaleza, revealing the need of health professionals receiving not only the victim, but the family that brings with itself habits, doubts and fears related to the care of their children.

In the study, we still visualized the woman as caregiver of these children, reinforcing the role of mother and grandmother in the family care, demonstrating that the father is still the financial provider of families.

In conclusion, it is important to mention about the urgency of inserting the families in discussions about the risks in the home environment, whereas this locus is where the majority of these accidents occur. Call upon the family, community, school, government agencies / NGOs and society, in general, to rethink about the mechanisms that favor the occurrence and recurrence of these damages in the children, simply, means, fulfill what is put into statutes, laws, health care plans, among other documents and official speeches.

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Characterization of families of children.


