The use of the hammock for premature positioning in neonatal ICU: analysis of electronic reports

Uso da rede para posicionamento do prematuro na UTI neonatal: análise de notícias eletrônicas

Uso de la red en los bebés prematuros en la UCI neonatal: análisis en los informes en los medios electrónicos

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How to quote this article:

ABSTRACT

Objective: To analyze the arguments contained in electronic reports on the network about the use of the hammock with premature infants in NICU environment. Method: A qualitative, exploratory document study. Six electronic news were analyzed searching for information that it could describe the technique and the results about using the hammock. Results: The main benefits highlighted were weight gain, better motor and sensory development and stress reduction. The more frequently arguments based on concrete evidence were linguistic competence and authority. Conclusion: The reports reveal a favorable view of hammock usage, and pointed benefits in accordance to previous studies, however there is a need to develop studies to evidence this practice.


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**INTRODUCTION**

Since the emergence of the Internet, the information became available to a much larger population, and next to that availability have repercussions inherent knowledge gained. After all, the information obtained from the news are also conditioned to the sociocultural context in which they were produced and, subjectively, to cooperating with its production. Thus, the player is excluded from the news construction time, in which the author evaluates the information that will be that text, even if understood as just a representation of reality.

The news published in health can be classified as pessimistic, optimistic or neutral, considering the influence of the character of the same in readership behavior. Being a comprehensive source of health information, the role of the media on the population should be considered very important.

It has been common to use electronic news by health institutions to disseminate innovative practices that are being applied in their care settings. One such practice, widely circulated on the Internet, is the use of the hammock for positioning of preterm infants in the neonatal unit.

The hammock is a piece of cloth suspended from both ends, which can be shaken and was used by Brazilian Indians, who called ini, before the arrival of settlers in Brazil as Pedro Vaz de Caminha to recorded in a letter sent to the king of Portugal in 1500. The hammocks were used for: sleeping, bury the dead and as a means of urban transport of high society. In more recent times, its functionality has been applied in hospitals in addition to the home at rest.

One of the ways in hospital use is intended for premature babies. It has been disseminated in the Neonatal Intensive Care Units (NICU) as a way to make more humane care and contribute to better development of the newborn, the sense of comfort.

The hammock for the newborns is smaller in size, which due to this became known as small hammock. It is made of soft, geometrically rectangular being posted by the edges inside the incubator where the newborn is positioned supine form, with the purpose play like environment womb.

Its practice in premature infants in the NICU lacks evidence by the scarce scientific literature. On the other hand, the electronic media is a certain amount of news and successful experience reports with its use, which leaves evidence that it is a strategy to meet the needs of newborns.

In this sense, when noticing that the expansion of the hammock use in Neonatal Intensive Care Units have not been addressed as evidence in scientific articles, it can be assumed that one of the important techniques ways of dissemination of health facilities and professionals is the internet, given that the hammock has been disclosed in various electronic news.

Given the above, the question proposed to research is: What are the arguments presented in the electronic media for hammock use in premature infants in the NICU in hospitals? Thus, this study is analyzed in the arguments for the use of the hammock, through the reports in the electronic media, for preterm infants in the NICU. The objective is to analyze the arguments contained in the reports in the electronic media on the hammock use in premature infants in NICU environment.

In this sense, the study purports to contribute to theoretical discussion with the investigation into the use of the hammock in premature without the purpose of exhausting the theme and even defend the use of the hammock, but to investigate the speech circulating in electronic media.

**METHODS**

This is a qualitative, exploratory study, documental type in which news were analyzed, aired in the electronic media, on the use of the hammock to the positioning of preterm infants in NICU, with the criteria:
temporal delimitation 2010-2015 and geographic in the state of Rio de Janeiro.

The research in the news was carried out through the internet in search of website, using the keywords: hammock, small hammock, premature NICU and Rio de Janeiro. 22 reports were identified, but because of duplicity on other sites, the corpus of analysis of this research consisted of 6 news.

These were analyzed based on the conceptual framework called argumentation technique, considering that the argument is a linguistic procedure to persuade and make the receiver accept what was communicated to him/her. This leads him/her to believe in what was said and take action on the message proposed by the arguments (from/to); authority, based on consensus, based on concrete evidence, based on logical reasoning and based on linguistic competence.

To identify the news, a summary table with the following data was created: news title, publication date, publication source, city and mentioned institution. And for a description of the technique, in each story, the following information was mapped: professionals cited in the news, material used in making the hammock, criteria for indication of technical, hammock usage time, results presented of the using.

Because it is research with public documents, this study was not set up as research with human beings, as provided in Resolution CNS n. 466/2012.

**RESULTS AND DISCUSSION**

The use of the hammock, the criteria for the appointment, and highlight the benefits to the baby and the professionals and mothers experience. The data obtained led to the block diagram shown in Figure 1 below:

In summary, with respect to health professionals mentioned in the text, four news cite doctors, three news nurses, two news the physiotherapist and a news nursing technician.

On the material used for manufacturing hammock, only two news reported that they are made of flannel fabric, cotton and crepe bandage, especially for sterilization before use for the newborn.

The use of the hammock for the premature baby is often daily. Time floats from an hour to one hour and thirty minutes with warning of the time limit for no injury to the spine of the newborn in the neonatal ICU.

The criteria for use of the hammock is, to be clinically stable, without oxygen support, stable heart rate, without equipment technology use, babies weighing between one and two kilograms, but also indicated to hasten weight gain in babies who have recovered from an illness and need to stay in the incubator. A news shows that treatment is adopted by two to three weeks until the child reaches 1.8kg.

On the criteria, the newborn is phammockd on the hammock after feeding, about thirty to forty minutes.

**Figure 1 – Identification of the news**

<table>
<thead>
<tr>
<th>Title</th>
<th>Date (dd/mm/yyyy)</th>
<th>Source</th>
<th>City / neighborhood</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Rio, mini hammocks helps recovery ICU babies</td>
<td>28/09/2011</td>
<td>Folha UOL</td>
<td>Niterói</td>
<td>Clinicas Hospital</td>
</tr>
<tr>
<td>Incubator balance hammock helps in the development of premature</td>
<td>28/04/2014</td>
<td>Ascom of Health Secretariat of RJ</td>
<td>RJ (Campo Grande)</td>
<td>Rocha Faria State Hospital</td>
</tr>
<tr>
<td>Balance hammocks in incubators in hospitals bring welfare to premature babies</td>
<td>23/05/2014</td>
<td>Crescer Globo Magazine</td>
<td>RJ (Campo Grande)</td>
<td>Rocha Faria State Hospital</td>
</tr>
<tr>
<td>Maternity Nova Iguaçu uses hammocks to relax premature babies</td>
<td>22/04/2015</td>
<td>Extra Globo</td>
<td>Nova Iguaçu</td>
<td>Municipal Maternity Mariana Bulhões</td>
</tr>
<tr>
<td>Maternity hospitals adopt the use of hammocks for premature babies</td>
<td>09/05/2015</td>
<td>Health Secretariat of RJ</td>
<td>RJ (Campo Grande) e Nilópolis</td>
<td>Hospital Rocha Faria State Hospital and Councilman Melchíades Calzans</td>
</tr>
<tr>
<td>Innovative techniques benefit premature babies</td>
<td>26/08/2015</td>
<td>Ascom of Azevedo Lima State Hospital</td>
<td>Niterói</td>
<td>Azevedo Lima State Hospital</td>
</tr>
</tbody>
</table>

Source: wn author.
monitored, preferably packaged, and in case of instability they are removed. The benefits pointed are gain in weight faster, improved heart rate and respiratoríal posture and motor development, as well as identifications stress reduction, promoting comfort, reducing the risk of bedsores and decrease the discomfort caused by the families of NICU devices, which implies the strengthening of the bond between mother and baby.

**Argumentation**

The first type of argument analyzed in the news was based on linguistic competence, being mapped twenty-one scientific technical terms that give support to information. This type of argument relates to the use of the cultured language and vocabulary appropriate to the situation to give credibility to the presented information. The following excerpts bring examples of technical terms used in the news:

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To be phammockd in little hammocks, babies need to be clinically stable, without the aid of oxygen in breathing and good heart rate. Newborns can be phammockd on the hammocks 40 minutes after breastfeeding to prevent aspiration. The method is applied in the incubators of the Intermediate Unit (IU) for a maximum of 40 minutes.

[...] the feature helps in reducing stress and body organization of small, which is reflected in the improvement of balance and quality of neuromotor development.
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Os termos “clinicamente estáveis”, “sem auxílio de oxigênio”, “boa frequência cardíaca”, “broncoaspiração”, “organização corporal” e “qualidade do desenvolvimento neuromotor” fazem parte da linguagem científica na área de saúde e são comumente usados pelos profissionais. O leitor ao receber a mensagem tem compreensão pelo contexto da escrita, mesmo sem descrição de parâmetros de estabilidade na notícia, que a rede pode ser utilizada quando o recém-nascido encontra-se em boas condições clínicas.

The argument of authority is the quote from renowned authors, authorities in a certain area of knowledge, to support a point of view. To exemplify this kind of argument, following excerpts authority speeches, which were divided into the categories of professional health and family of the baby.

A nursing coordinator of the Neonatal Intensive Care Unit says: “In the little hammock children naturally arise in utero position: aside, with arms and legs bent and hands near the chin. So they are quieter, use less energy and it helps in weight gain. [...]”

In the same news, the mother of a premature highlighted her impression to see her daughter on the hammock: “The impression is that it really feels in my womb. She is visibly calmer and I know that it helps in the development and weight gain.”

Only a speech refers to scientific studies, in which the professional says that even not knowing studies on the subject he believes that the technique brings benefits:

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Although not knowing studies to prove the efficacy of the method, the physician A. B., Department of Neonatology of the Brazilian Society of Pediatrics says to see advantages in their use. “This allows the child to have less heat loss and incorporate more nutrients, allowing the increase of baby the weight.”
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Out of eighteen discursive passages classified as argument of authority, six are medical professionals, four nursing, two physiotherapy and four babies of mothers in hammock usage. This type of argument leads the reader to credit truth about the benefit of the hammock for newborns. This is a convincing technique to be coordinated with the scientific language and the testimony of witnesses potentiates the message to be transmitted in the news.

In the argument based on concrete evidence was found a total of eleven excerpts. It is configured as the use of data as figures and statistics, historical data, experience and facts are exemplified in the following excerpts:

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Currently, there are four hammock operating in motherhood, but ten more will be installed in the coming days to increase the number of babies benefit from the process. The forecast is that the hammock technique is extended to all state hospitals in the first half of this year.

M., who was born with 1,030kg and 36 cm, grows ten centimeters and is 1,695kg, while H., who came into the world with 1,010kg and 36 cm, now weighs 1,715kg and is 44 cm.
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The first excerpt is expected to expand the use of the technique in the institution, while the second shows the increase in weight of infants who use the hammock. In both cases the attempt is to provide the reader the belief in the importance of the information provided.

Quantitative data direct the player to logical thinking, especially when the subject offers data before and after, showing the use of the net benefit to the newborn.

In this sense, once again player to consume the matter with the information available, taking into considering the arguments based on concrete evidence, linguistic and discourse of authority, he organizes mental form your opinion on the news.

In the argument based on logical reasoning identified two segments that have a relationship of cause and consequence. As an example, the following excerpt...
highlights the speech of a professional who justifies the advantages of using the hammock, through cause and effect, to report lower levels of stress and more comfort for the newborn: “The little hammock facilitates our work, because they are more relaxed and cry less.”

In the health area, some propositions are accepted as true when a significant number of studies show similar results, which leads to the argument based on consensus. This is done by supporting the use of evident propositions by themselves or universally accepted. 10

Were identified in the news five arguments fragments based on consensus, of which we highlight two that have consensus regarding the need for bending and restraint in the positioning of preterm infants: “[...] using the hammock in the incubator, the baby simulates the same position as when he/she was in the womb of the mother and maintains an adequate standard of development [...]”11 and; ‘The oval shape of the object allows the baby to settle in the same way you would in the womb. Thus, he calms down and reduces power consumption, promoting motor development and weight gain.”12

The excerpts above refer to a consensus that for premature babies continue to develop properly and quickly, positioning is crucial in the context of a favorable and environment surrounded by positive stimuli.

Studies of the 1980s compared the position of the premature baby on the hammock with other positions in the incubator and concluded that the supine position in the hammock does not interfere negatively in breathing pattern and in some cases increases the oxygen saturation in the blood. 4 However, it should be used with caution in preterm infants with a respiratory disorder, and should not be used in cases of oxygen-dependent infants. 5,7 In three of the news analyzed, the criteria cited for use of the hammock for premature babies were clinically stable and not dependent on oxygen, which agrees with the recommendation found in the literature. 11,14,5

The use of the hammock causes greater relax to the baby by reducing the heart rate and respiratory rate, compared with the prone position and decrease the frequency of episodes of apnea. 18 A news 11 reported that the babies using hammock have reduced heart rate and respiratory.

In another study, the evaluation of the stress level of newborns, it was noticed lower scores on hammock usage period, with no change in oxygen saturation or heart rate. 19 Five news also pointed to the reduced stress of the newborn, expressing itself through the terms “stress reduction”, “calm” and “relax”, stressing that promoting comfort, reduces crying and keeps vital signs more stable. 11,2, 14,6

In addition, the hammock is the possibility to simulate the intrauterine environment for the approximate position, creating containment boundaries for the baby. The use of the hammock showed a positive contribution to the sensorimotor development and improvement of standard flexor members and approach the hands to the midline of the body and mouth, promoting symmetry and increasing muscle maturity. 6,7,20,1 All analyzed news reported improved on postural organization and motor development of preterm infants. Thus, the body position plays a crucial role in the cardiopulmonary function and the development of the neuromuscular system. 22

Another benefit to using the hammock shown in the literature is the improvement in auditory and visual responses, favoring newborn interaction with the environment and the people around you. 6,7,18 This result was also prominent target in two news 15,16 as a sensorineural benefit related to the use of the hammock.

Despite being documented, some improvement in weight-height and psychomotor development in premature infants who used the hammock in the ICUN, the benefits and effects on long-term lack of scientific evidence. 21

Indeed, weight gain, cited as a benefit in the news, was found only in one study that evaluated this item, and it has not observed difference among babies who used the hammock and those who did not. 7 However, based on the synchronous-active development theory, it is known that when prevents stressful events for premature promotes comfort and posture and behavioral organization, there is a reduction of energy cost, which can in turn contribute to the weight gain. 24

The joint analysis of the arguments with the data presented in the literature allows the reader of this study becomes aware, in short, to also form their opinion of roughly the reader of those news, despite the difference that in this study the reader had access to more data beyond those presented in the field.

This leads to possible decision-making for the formation of opinion on the theme. To think in this streamlined logic is to understand that the texts take effect called the technique of the field of communication, known by the acronym AIDA. 25-6 The decoding of the acronym is Attention, Interest, Desire and Action, which, when applied, causes encourages the reader to take some action, even if (in)conscious. In this case, in practice within the Neonatal ICU, either for or against, by inducing the news arguments and studies possibility.

CONCLUSION

Analyzed and discussed news pointed benefits to the development of premature infants in the NICU with the use of the hammock based on the technical application. There was no mention in the text of the argument matters related to scientific studies give evidence to support the practice or its results. Thus, the reports in the electronic media still reflect an empirical application of hammock use in preterm infants. However, the indicated benefits resonate with previous studies.
Weight gain, improvement in motor and sensory development, and stress reduction are the key benefits highlighted in the analyzed news, but the technique to use the hammock for newborns still lacks parameters in order to file the institutions. The news brings a favorable view on the use of the hammock, with positive results in the short term to the development of the baby, but there is the need for research on scientific grounds to support the results already obtained and to evaluate the impact in the long term. Do not want to deny that the validity of the information in the news, which is a function of the media.

In the analysis of news it is found that the news stories were used several arguments in order to convince readers to the adoption hammock in NICUs, which is ratified by the technique of AIDA.

At the end, we cannot deny that this study left gaps as they were not analyzed and discussed the articulation of arguments with the layout of the news, which also influences the composition of the arguments in the sense of visual aesthetics.

Finally, after analysis and discussion of the proposed object in the study, with no claim to exhaust it, is considered that the use of the hammock in NICUs is a reality, but also lacks scientific evidence for its use with newly born. Think this perspective is to point the questions of when and how to use hammocks with premature infants in the NICU. These issues, from the empirical, move the Science.

Therefore, investing in research on the early positioning is healthy development of better neonatal care, and by the evidence, to adopt with reservations or not, the hammock device. Despite the lack of discussion about the cost, it is possible to infer that, in principle, hammock is a low investment. Elements such as the above are indications for the construction of new studies questioning.

REFERENCES


The use of...