SOCIAL REPRESENTATIONS OF OBSTETRIC VIOLENCE FOR PUERPERAL WOMEN AND HEALTH PROFESSIONALS: CORRESPONDENCE FACTOR ANALYSIS

Antonia de Maria Gomes Paiva
Ana Maria Martins Pereira
Sibele Lima da Costa Dantas
Antonia Regynara Moreira Rodrigues
Francisca Weslla Oliveira da Silva
Dafne Paiva Rodrigues

ABSTRACT
Objective: to analyze the social representations of puerperal women and health professionals about obstetric violence. Method: a multimethod research guided by the Theory of Social Representations and conducted in two maternities in the state of Ceará - Brazil, with 28 health professionals and 283 puerperal women from November 2018 to January 2019, using the Free Word Association Test. The data were analyzed by means of Correspondence Factor Analysis in the TriDeux Mots 5.3 program. Results: it was observed that obstetric violence was anchored, by health professionals, in violent practices, which encompass from rude language to interventions based on weak evidence. In turn, the puerperal women perceived it in the absence of information, the treatment received and the deprivation of their rights. Conclusion: social representations about obstetric violence are revealed by the technical and normative aspects of the obstetric practice evoked by the health professionals and are signified by puerperal women in the behavioral and relational elements perceived and felt during the parturition process.

DESCRIPTORS: Obstetric Violence; Delivery; Obstetric Nursing; Social Psychology; Humanization of Delivery.

HOW TO REFERENCE THIS ARTICLE:
INTRODUCTION

Violence during delivery is characterized as an action or intervention in the mother-child binomial performed without the woman’s prior consent[1]. The incorporation of violent practices during delivery dates back to the late 19th century, when the obstetric field ceased to belong to the female domain and started to cover the medical practice and, since then, there has been a pursue to control the biological event of delivery. Hospitalization generated an increase in the number of interventions and culminated in several types of violence, from negligence in care to the indiscriminate use of interventions with no scientific evidence[2].

As a consequence of the delivery care model adopted in Brazil, it is the country with the highest rate of cesarean births in the world, reaching 56% of all deliveries in the country, considering the private health care network and the Brazilian Unified Health System (Sistema Único de Saúde, SUS), with the rationale of improving maternal and neonatal rates. It is worth noting that the rate of cesarean births accepted by the World Health Organization (WHO) is 10%, and higher rates are not associated with reduced maternal and neonatal mortality. Rates of cesarean births above 30% are related to higher indices of maternal and neonatal mortality due to surgical complications, such as infections, as well as with the birth of premature infants[3].

It is in this scenario that the following question arose: How do the behaviors that make up obstetric violence are represented by puerperal women and health professionals? This study may contribute with more humanized practices that consider the social contexts of the assisted subjects, thus adopting a humanized ethical posture capable of meeting the patient’s needs.

As it is necessary to appropriate the meaning constructed by the health professionals and puerperal women on the care practice during delivery, the Theory of Social Representations (TSR) has shown to be appropriate to investigate this phenomenon, because it consists of a socially developed and shared form of knowledge with a practical goal and contributes to the construction of a reality that is common to a social body[4].

Consequently, the research aimed at analyzing the social representations of puerperal women and health professionals about obstetric violence.

METHOD

This is an exploratory study with a multimethod approach, guided by the theoretical framework of the Social Representations, considering Moscovici’s procedural approach[5]. It was conducted in two scenarios: the obstetric sector of a public hospital (unit one), located in the municipality of Ipu, in the inland of the state of Ceará; and a public maternity (unit two) in the municipality of Maracanaú, from the metropolitan region of the capital city of the state of Ceará, both located in northeastern Brazil.

The research was conducted with puerperal women hospitalized during the data collection period and with nurses, physicians and nursing technicians who work in direct delivery care. Health professionals who were on vacation and/or on any type of work leave were excluded, as well as puerperal women who had some clinical health condition that prevented or made it impossible for them to participate in the study.

The size of the health professionals’ sample was defined using the simple random sample criterion, while that of puerperal women’s sample was calculated using finite population sampling, considering the mean number of admissions in the institutions,
resulting in 289 puerperal women, of which 81 were from unit one and 202 from unit two.

The health professionals were invited to participate in the research during their work shifts, after the objectives of the study were explained, and those who accepted to participate were conducted to a reserved environment, where they could feel comfortable to answer the research questions. When it was not possible to answer during the shift, the researchers awaited for the shift to end. The professionals showed themselves receptive and all those invited accepted to participate in the research.

Regarding data collection with the puerperal women, the approach was made on the first or second day of the puerperium, depending on the participants’ physical and emotional state. The interviews were initiated after signing of the Informed Consent Form and had a mean duration of five minutes, considering that a maximum time of five seconds should be given to answer each inductive stimulus.

The data were collected from November 2018 to January 2019 using an instrument made up of items to characterize the participants and inductive stimuli selected through the Free Word Association Test (FWAT), which consists of a projective technique, a research instrument used for data collection that provides information on the mental processes experienced by the respondents. By using these inductive stimuli, semantic universes are evoked through the effective explicitness of the common universes of words(6).

The sociodemographic data of the professionals and of the puerperal women were submitted to simple descriptive statistics analysis. Information from the FWAT were transcribed and analyzed using the Tri-Deux Mots software, version 5.3, which enables to verify correlations between variables predefined by the researcher, in addition of attraction and repulsion relationships between the elements of representational fields about a given object(7).

After data collection, the following steps were carried out: creation of dictionaries, one for each inductive stimulus; grouping of words with semantic similarity, coding of the participants with an order number, followed by the coding of the three fixed variables used: belonging group, research locus, and schooling; subsequently, the operational data stage was performed(6).

The project was approved by the Research Ethics Committee of Universidade Estadual do Ceará, under opinion No. 3,050,083.

RESULTS

The study analyzed data of 29 professionals from the multiprofessional team and of 289 puerperal women. As can be seen in Table 1, the multidisciplinary team consisted of nurses, physicians and nursing technicians. In Unit one, most of the participants are active in the professions since approximately one to three years, having attended other courses more recently. In turn, the participants from Unit two have been active for four to nine years, and most of them attended some other course between one and three years ago.
Table 1 - Characterization of the professionals who work in the hospital assistance for delivery and puerperium, according to the professional variables. Fortaleza, CE, Brazil, 2019

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unit 1</th>
<th>Unit 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Nurse</td>
<td>6</td>
<td>54,5</td>
</tr>
<tr>
<td>Physician</td>
<td>3</td>
<td>27,2</td>
</tr>
<tr>
<td>Nursing technician</td>
<td>2</td>
<td>18,3</td>
</tr>
<tr>
<td>Working time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1 year</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>1-3 years</td>
<td>4</td>
<td>36,4</td>
</tr>
<tr>
<td>4-9 years</td>
<td>3</td>
<td>27,3</td>
</tr>
<tr>
<td>10+ years</td>
<td>3</td>
<td>27,3</td>
</tr>
<tr>
<td>Last course taken</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1 year ago</td>
<td>7</td>
<td>67,3</td>
</tr>
<tr>
<td>1-3 years ago</td>
<td>3</td>
<td>27,3</td>
</tr>
<tr>
<td>3-5 years ago</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Does not remember</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: The authors (2019).

Table 2 presents data about the sociodemographic characterization of the puerperal women participating in the study, with predominance of women aged from 20 to 35 years old, in a stable union, with complete high school, no paid work, and Catholics.

Table 2 - Characterization of the puerperal women treated in hospital care, according to the sociodemographic variables. Fortaleza, CE, Brazil, 2019 (continues)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unit 1</th>
<th>Unit 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>14 – 19</td>
<td>15</td>
<td>19,2</td>
</tr>
<tr>
<td>20 – 35</td>
<td>48</td>
<td>58,8</td>
</tr>
<tr>
<td>36 – 42</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stable union</td>
<td>35</td>
<td>43,3</td>
</tr>
<tr>
<td>Married</td>
<td>22</td>
<td>27,7</td>
</tr>
<tr>
<td>Single</td>
<td>19</td>
<td>22,7</td>
</tr>
<tr>
<td>Separated</td>
<td>2</td>
<td>2,1</td>
</tr>
<tr>
<td>Has a boyfriend</td>
<td>3</td>
<td>4,2</td>
</tr>
</tbody>
</table>

Schooling
Table 3 presents the obstetric profile of the puerperal women participating in the research, with predominance of multiparous women and term pregnancies in both units researched. Although the most recurrent delivery route in Unit one was vaginal, abdominal deliveries predominated in Unit two.

Table 3 - Characterization of the puerperal women treated in hospital care, according to the obstetric variables. Fortaleza, CE, Brazil, 2019

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unit 1</th>
<th></th>
<th>Unit 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Parity</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Primiparous</td>
<td>37</td>
<td>45,4</td>
<td>87</td>
<td>43,1</td>
</tr>
<tr>
<td>Multiparous</td>
<td>44</td>
<td>54,6</td>
<td>115</td>
<td>56,9</td>
</tr>
<tr>
<td>Delivery route</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaginal</td>
<td>45</td>
<td>55,4</td>
<td>97</td>
<td>48,3</td>
</tr>
<tr>
<td>Abdominal</td>
<td>36</td>
<td>44,6</td>
<td>105</td>
<td>51,7</td>
</tr>
<tr>
<td>Gestational age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preterm</td>
<td>-</td>
<td>-</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>Term</td>
<td>57</td>
<td>70,2</td>
<td>157</td>
<td>77,7</td>
</tr>
<tr>
<td>Post-term</td>
<td>24</td>
<td>29,8</td>
<td>21</td>
<td>10,3</td>
</tr>
</tbody>
</table>

Source: The authors (2019).

Using the inductive stimuli delivery, being care for during delivery/caring during...
delivery, and maltreatment during delivery, retrieved from the FWAT, a number of evocations were obtained, which were processed in the Tri-Deux Mots program and interpreted according to Correspondence Factor Analysis (CFA). The fixed variables used were belonging group, research locus and schooling.

Figure 1 represents both axes: axis 1 (horizontal) and axis 2 (vertical). Factor one is represented by the red color, whereas Factor two, by the blue color. The fixed variables are represented by the green color, where LOC refers to the research locus, GRU to the belonging group and ESC, to the participants’ schooling. The numbers one, two and three along with the evocations are the inductive stimulus.

![Figure 1 - Factor plan of the social representations of puerperal women and health professionals about obstetric violence. Fortaleza, CE, Brazil, 2019](image)

KEY: GRU1: Primiparous; GRU2: Multiparous; GRU3: Nurse; GRU4: Nursing technician; GRU5: Physician; LOC1: Ipu; LOC2: Maracanaú; ESC1: Illiterate; ESC2: Incomplete Elementary School; ESC3: Complete Elementary School; ESC4: Incomplete High School; ESC5: Complete High School; ESC6: Incomplete Higher Education; ESC7: Complete Higher Education

A total of 3,106 evocations were obtained from 311 individuals who answered the FWAT, representing 596 different words, which allowed for an approximation to the semantic universes of the social representations of health professionals and puerperal women on obstetric violence.

The evocations from the first stimulus, delivery, in axis F1 (horizontal), which presented greater representation considering their correspondence per factor (CPF), on the left side, related to health professionals, nurses (CPF: 307), nursing technicians (CPF: 89) and physicians (CPF: 110) were as follows: humanization (CPF: 127), respect (CPF: 60), life (CPF: 100), and care (CPF: 75).
Still regarding the delivery stimulus, on axis F2 (vertical), in the upper quadrant and related to the groups of health professionals, nursing technicians and physicians, and of the puerperal women, represented by complete elementary school, the main words evoked were: dream (CPF: 36), surprise (CPF: 25) and concern (CPF: 15), whereas in the lower quadrant we find the word care (CPF: 69), linked to the professional nurses and to the puerperal women, as the most representative.

In stimulus two, care measures/delivery care, in axis F1 (to the left), the representative words were the following: auscultate (CPF: 69), calm (CPF: 30) and safety (CPF:29), evoked by the professional physicians and nurses, in addition to individuals with incomplete high school; whereas, to the right, we find the word good (CPF: 17), represented by the group of puerperal women with incomplete and complete elementary school.

Continuing with the description of stimulus two, in axis F2 (upper end), we find the following evocations: listen to (CPF: 73), report behaviors (CPF: 63), exercise (CPF: 37) and empathy (CPF: 20), evoked by the professional nursing technicians and physicians, and by puerperal women with complete elementary school and, in the lower end, monitoring (CPF: 68) and responsibility (CPF: 18), evoked by the nurses.

In relation to stimulus three, maltreatment during delivery, in axis F1 (to the left), the main evocations made by the groups of health professionals were the following: verbal violence (CPF: 33), obstetric violence (CPF: 24) incompetence (CPF: 18) unnecessary procedures (CPF: 17), disrespect (CPF: 17) and episiotomy (CPF: 17). In turn, no evocations appear to the right of the graph, represented by the puerperal women.

For stimulus three, in axis F2 (upper end), the most significant evocations were: deny information (CPF: 38), crying (CPF: 34), physician (CPF: 26), loss of rights (CPF: 23), rude language (CPF: 19) and Kristeller (CPF: 10), evoked by nursing technicians and by individuals with complete elementary school. There are no significant evocations in the lower quadrant.

Therefore, it was shown that each group of research participants has its own representation about each inductive stimulus, reasserting the relevance of life experiences in the creation of social representations.

DISCUSSION

Incorrectly indicated abdominal deliveries or those performed for reasons other than maternal and fetal well-being are a component of obstetric violence. Many routine cesarean sections, scheduled according to patients’ and professionals’ convenience, have undesired outcomes, disregarding the scientific evidence and the real health needs of the assisted people. According to the research entitled Nascer no Brasil (Being Born in Brazil), women’s choice for abdominal deliveries even in situations when there is no maternal or fetal risk is more frequent among women with a better economic status. This option is associated with the assessment of a good care pattern, representing a reason for the increase in the number of Cesarean sections in the country.

The representations about delivery differ from each other according to the group to which they are related. Therefore, physicians perceived delivery as an act that requires respect to pregnant women, to their own time, and to the standardization of the procedures
that guide professional practices consistent with care humanization, pointing to the fact that their actions are anchored in the reified universe, present in the legislation that governs delivery care standards, suggesting a more technical connotation regarding delivery and birth care.

In turn, the nurses represent delivery in childbirth as a physiological process that belongs to the female sphere and emphasize the importance of interpersonal relationships in the care that should be provided to women, due to the moment they are experiencing and all aspects inherent to it, either positive or negative. The health professionals’ sensitivity enables to perceive women’s needs and makes it possible to promote an environment of interaction that favors the establishment of relationships based on mutual trust.

Given the anchoring nurses made about delivery, we can notice that delivery represents naturalness, which may be the reason why nurses make less use of interventions during deliver care. The recommendations by the World Health Organization\(^\text{10}\) assume that, if delivery is taking place normally and there are good maternal and fetal conditions, no additional interventions are necessary to accelerate the process.

Given this perception, the participation of obstetric nurses in the assistance provided during labor, delivery and puerperium is directly linked to the qualification of the care provided. The reduction in the number of unnecessary interventions is highlighted, in line with the movement for the humanization of the assistance provided to the mother-child binomial in the pregnancy-puerperal cycle\(^\text{11-14}\).

This thinking strengthens those movements that seek assistance based on the women’s needs, with a focus on the physiology of delivery and on female protagonism and autonomy. Therefore, it goes beyond the biological aspects, maintaining the focus on subjectivity, which becomes necessary when dealing with human beings, especially in an event full of importance and symbolism such as delivery\(^\text{14}\).

The evocation of a dream refers to women’s idealization of motherhood, revealing that the possibility of bearing a child may be a life goal to be achieved in order to reach fullness of their womanhood. It may also reveal the happiness resulting from motherhood, while the word surprise points to unplanned, but positively accepted pregnancies.

The word concern represents the crystallization of the difficulties and fears that involve the process of giving birth, not only in biological or physiological terms, but also related to the relationships established between patients and health professionals. The delivery outcome often deviates from woman’s plans and expectations, either due to the care provided in hospital units, to a delivery route different from the idealized one, or to logistic issues of the health services.

With regard to the decision on delivery route, a number of studies indicate that most pregnant women prefer vaginal delivery when they start prenatal care but, over the course of the gestational period, a myriad of factors promotes a change in their stance. Among these factors, it is worth mentioning the pressure exerted on women by prenatal physicians, causing fear of the possible complications of vaginal delivery, resulting from the infant’s size, narrow pelvis and nuchal cord, reasserting the consensual and erroneous idea that abdominal birth is safer\(^\text{8}\).

The inability of the professionals assisting the delivery is also a relevant factor, as the women link vaginal delivery to the possibility of being subjected to maltreatment during hospitalization. In addition to that, the fear of not being able to resume their sexual life after a vaginal delivery stands out\(^\text{8}\).

At the closest end related to individuals with lower schooling, i.e., puerperal women with incomplete/complete elementary school, it was observed that delivery is linked to care. That evocation refers to the need for the parturients to feel cared for during the parturition process. For them, care, or being well cared for, was perceived preferably from
the perspective of gestures made by the professionals towards them, and not from the perspective of the procedures performed, emphasizing the value attributed to interpersonal relationships.

In this sense, care is an expression of humanity, which includes values converging into peace, freedom, respect and love. Care is essential for the development of human beings and their ways to relate to their peers and to the world that surrounds them, and it must be fostered\(^{(15)}\).

The groups of professionals anchor the care actions during delivery in the technical aspects of assistance, as can be perceived by the link between the word auscultate and this stimulus. In this sense, these finding reveal the predominance of the reified universe, with a strong influence of normative aspects in the ways of thinking care.

With the use of the words calm and safety, we perceive a reference to the stance that health professionals should adopt, putting into practice the ability of establishing bonds with the parturient women, providing safety and transmitting calm, given the finding that the parameters assessed in the monitoring of the mother-child binomial are still in line with the standard. Among the aspects present in the monitoring of the maternal and infant parameters, which include maternal vital signs, obstetric examination and monitoring of fetal heart beats, professionals gave an emphasis to the last one.

Intermittent auscultation of the fetal heart rate is a technique that allows assessing heart rate for brief periods of time, with manual evaluation and recording of its pattern. Therefore, intrapartum fetal monitoring aims at preventing the occurrence of injuries related to fetal hypoxia and the performance of unnecessary interventions that may lead to maternal and fetal morbidity and mortality\(^{(14,16)}\).

Puerperal women link deliver care to something beneficial, which they would like to receive. Here, the word good is also related to the care received, which was considered positive by most women, although they had often faced situations that were not the ideal ones, in terms of qualitative care.

Nursing technicians related delivery care to listening the specific complain and needs of each woman, valuing their feelings and beliefs, in addition to informing about the procedures that will be conducted, explaining the need to perform them. In this meaning, interpersonal relationships have a significant value at the time when the care plan becomes individualized, in order to contemplate the peculiar aspects of each woman, within the delivery context.

It was observed that professionals with higher education, especially nurses, related maltreatment during delivery to violent attitudes in a broad sense, from verbal violence, expressed by rude language and by censoring the parturients. It is represented by attitudes that often interfere with women’s autonomy with regard to the provision of their basic needs, such as walking, nutrition and intake of liquids, up to the performance of unnecessary procedures during delivery care.

The evocations reveal the presence of technical terms, present in the reified universe. These terms gain meaning from their union, through the mechanisms of objectivation and anchoring, creating the representations on the terms, based on the health professionals’ individual experience.

The professionals relate the performance of unnecessary practices to the incompetence to provide less interventionist assistance. As there are guidelines designed by competent agencies, they should guide the professionals’ attitudes, so as to minimize harms, in order to promote an improvement in care quality, an increase in the maternal and infant rates and, consequently, satisfaction of the parturients and the community.

In this sense, the WHO points out that the objective of the assistance provided
during delivery is to allow for the birth of a healthy infant, with positive repercussions for the mother. Therefore, care should be provided with the least intervention possible, based on a qualified and humanized care provided to mothers and infants, aimed at rescuing and valuing the physiology of delivery and at achieving a balance between the different types of technology (i.e., soft, soft-hard, or hard), respecting the citizenship rights(3).

In this sense, they refer to the denial of information, an essential right of parturient women to know their real conditions or their children’s health status. The Ministry of Health recommendations include requesting patient’s permission before performing any procedure, which means that the patients should be the focus of attention, rather than the technologies to be executed; as well as offering information on the results of the procedures performed(17).

Due to their lower access to the reified universe, the individuals with a high school degree, a group that includes most of the puerperal women and health technicians, represent obstetric violence based on personal experience, either from their own experience or from that shared by other women. This population perceives obstetric violence in everyday attitudes in maternities, such as not informing the parturients about the progress of labor, about the risks and benefits of the practices that may be used, about warning signs, and about criteria that may be decisive in the choice of the delivery route.

From the health professionals’ perspective, the performance of procedures without prior communication/women’s consent, experienced in their routine practice, is anchored in the evocation of disrespect. The evocation of crying, in turn, is a reference to the main manifestation reported by the women when subjected to maltreatment.

Commonly, in delivery care, it is possible to perceive that women who were subjected to procedures such as cesarean sections are not able to report the reason why they were subjected to surgical delivery, which reasserts the control of scientific knowledge over the female body and the power exerted by health professionals over these bodies.

The study carried out presents the limitation of showing the social representations of a single Brazilian region, specific of the population under study. Consequently, it is suggested to develop research studies in other Brazilian regions.

CONCLUSION

The social representation of obstetric violence from the perspective of puerperal women and health professionals was made evident in different ways. Health professionals perceive obstetric violence from the technical perspective, associating it with technical failures in work performance, such as the execution of procedures with no scientific evidence. In turn, the puerperal women represented obstetric violence as the loss of their rights and the rudeness with which they are trivially treated.

The current study contributes to the discussions on the National Policy of Care Humanization, contextualizing the importance of welcoming, guidance and valuing women's feelings and choices, whether in prenatal, delivery or postpartum care, allowing for reflections about the professional practice, from the perspective of changing the paradigms of obstetric care.

ACKNOWLEDGMENTS
To Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brazil (CAPES) – Funding Code 001, which supported conduction of the current paper.

REFERENCES


Secretaria de Vigilância à Saúde; 2016.


*Article extracted from the master’s degree dissertation entitled “Social representations of puerperal women and health professionals about obstetric violence”. Universidade Estadual do Ceará, 2019.

Received: 25/07/2020
Approved: 20/07/2021

Associate editor: Tatiane Herreira Trigueiro

Corresponding author:
Antonia de Maria Gomes Paiva
Unidade Básica de Saúde Flores – Ipu, CE, Brasil
E-mail: dymarry@yahoo.com.br

Role of Authors:
Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - Paiva A de MG, Pereira AMM, Dantas SL da C, Rodrigues ARM, Silva FWO da, Rodrigues DP; Drafting the work or revising it critically for important intellectual content - Paiva A de MG, Pereira AMM, Dantas SL da C, Rodrigues ARM, Silva FWO da, Rodrigues DP; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - Paiva A de MG, Pereira AMM, Dantas SL da C, Rodrigues ARM, Silva FWO da, Rodrigues DP. All authors approved the final version of the text.

ISSN 2176-9133

This work is licensed under a Creative Commons Attribution 4.0 International License.